



**LIFE13 NAT/SI/000314**

**FINAL Report**  
**Covering the project activities from 01/09/2014 to 28/02/2019**

Reporting Date  
**28.05.2019**

**Conservation of Natura 2000 sites Kočevsko -**

**LIFE Kočevsko**

Project Data

<b>Project location</b>	Kočevje (Slovenia)
<b>Project start date:</b>	01. 09. 2014
<b>Project end date:</b>	28. 02. 2019
<b>Total Project duration (in months)</b>	54 months
<b>Total budget</b>	2.270,013 €
<b>Total eligible budget</b>	2.270,013 €
<b>EU contribution:</b>	1.135,006 €
<b>(%) of total costs</b>	50 %
<b>(%) of eligible costs</b>	50%

Beneficiary Data

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## 2. Executive Summary

The project “Conservation of Natura 2000 sites Kočevsko” started in September 2014 and finished in February 2019. Its main focus was the active protection of Natura 2000 sites Kočevsko by taking specific actions for the preservation of nature. The project focused on improving habitat conditions and creating a favourable conservation status of the critically endangered forest bird species (western capercaillie, hazel grouse, white-backed woodpecker and three-toed woodpecker), of the only pair of the white-tailed eagle in the Kočevsko region, and of the extremely vulnerable underground ecosystem with the *Proteus Anguinus* as the main indicator of the underground water state quality.

In the first part of the project, the focus was on the activities dealing with preparatory actions. A detailed assessment of the initial status of the project area was carried out and the conservational baseline for the management of the Natura 2000 sites Kočevsko was prepared. Relevant sectoral management plans as well as demographic data were analysed. In addition to this, the key sectoral stakeholders were outlined and once fully assessed and determined, the meetings and workshops followed in order to prepare and finalize sectoral analyses. In the initial activities, the baseline census of the five target species, the habitat type and the baseline study about the socio economic status of the Natura sites Kočevsko were carried out. The project successfully delivered two educational courses regarding four target bird species and four technical reports were prepared about the baseline status of the target species and the habitat type as well as a completed database of the target species and caves pollution.

Before concrete conservation actions took place, the measure plans were prepared for the white tailed eagle, three toed woodpecker and white backed woodpecker, capercaillie and hazel grouse.

By organizing and determining the method of data collection taking place during the initial actions of the project, a very useful baseline data was collected in regards to the target species in Kočevsko region. The established methodology offered a good starting point for monitoring that was carried out in actions D.

The project activities have improved the habitat of *Proteus Anguinus* and the habitat type “caves not open to the public”. Seven water caves have been cleaned followed by delivering seven technical reports about the cleaning.

The habitat and population of *Picoides tridactylus* and *Dendrocopos leucotos* have been improved by establishing a network of eco cells with measures, and thinning of trees with tree griddling within the 200 ha.

For the improved conditions of the habitat and population of *Tetrao urogallus* and *Bonasa bonasia*, 7500 seedlings have been planted, 21 hunting objects have been removed, 30 signposted feeding fences, 20 of them newly set, 20 traffic signs, 20 road barriers, 20 traffic routing boards, and 1794 ha of quiet zones have been established.

Habitat trees and eco-cells have been leased for the period of twenty years. They will be left to a natural development and this will contribute to deadwood accumulation, which is a key component in the woodpecker's habitat.

Three observation towers have been built and pathways to observation towers have been redirected, a winter feeding station was established, floating barrier on the lake has been set up, 500 meters of wooden fence for cattle, and two digital cameras have been set up, one filming the nest and one for the winter feeding station. All those implemented measures contribute to better living conditions of *Haliaeetus albicilla*, its habitat and consequently better and more successful nesting conditions. In accordance with the Article 13.5 of Common Provisions, notice boards describing the project were erected at locations where C actions were implemented.

The project also delivered a study on the benefits of the Natura sites Kočevsko, where the socio economic effects of the project actions and functioning of the target ecosystems were assessed.

To raise the awareness of the project, many promotional materials and booklets have been published. A promotional movie was filmed and the project's website ([www.life-kocevsko.eu](http://www.life-kocevsko.eu)) and the facebook site were established at the beginning of the project. The project website is available in Slovene and English language and it has been regularly updated. Many articles have been written and published in local and national newspapers and the project's activities appeared on national television and radio stations. During the duration of the project, there was an extensive networking with main stakeholders and numerous trainings and educational events took place. In Kočevska Reka, the educational trail along the lake was set up with information boards and models and the "Eagle room" in Kočevska Reka was established.

In order to provide sustainable results of the project and further raise the awareness of the project results and Natura 2000 sites Kočevsko, the project managed to establish a good cooperation and network with similar projects. There have been excursions to national parks, participation at international and national conferences. The Layman's report about LIFE Kočevsko delivers information about the project, background and the implemented field activities. The main objectives and activities are illustrated in a comprehensive way and are aimed for general public.

As a result of the project activities, the habitat types of the target species and one target habitat were extensively improved while the concrete implemented conservation activities will contribute to the conservation of the target species and of the target habitat not just in the Kočevsko region but in a wider region as well. It should also be pointed out that one of the outstanding long term results of the project is undoubtedly the establishment of the conservation guidelines and their incorporation into a relevant sectoral management and all this presents an upgrade to the existing system of management of Natura 2000.

The project LIFE Kočevsko was able to achieve its ambitious goal to become a demonstrative project as set in the project application. We became important stakeholders in establishing Natura 2000 forestry measures, relevant norms and their implementation in Slovenian forests and beyond.

### **3. Introduction**

The area of Kočevsko is characterised by a large diversity of species and different habitats. At the same time it is famous for its extensive forests and is considered to be one of the most naturally preserved parts of Slovenia. The whole Kočevsko area is defined as a Natura 2000 site both under the Birds Directive (SPA Kočevsko) and under the Habitats Directive (SCI Kočevsko).

Because of the inappropriate forestry and game management practices in Kočevsko area and the lack of active and good practice management of target species their existence as well as their habitats had been affected. Forest work and uncontrolled human leisure activities had been causing disturbances in their habitats and consequently depressing their breeding success. A significant decline in some species population had been detected. Additionally, waste dumping in karst caves and ignorance of good farming practices by local farmers had been polluting underground karst habitat and water, resulting in underground habitat degradation and decline in *Proteus Anguinus* population. The project focused on reducing and eliminating these threats.

Apart from that, the project aimed to re-establish favorable conservation status of five target species according to Birds Directive (western capercaillie *Tetrao urogallus*, hazel grouse *Bonasa bonasia*, white-backed woodpecker *Dendrocopos leucotus*, three-toed woodpecker *Picoides trydactylus*, white-tailed eagle *Haliaeetus albicilla*), one priority target species according to Habitats Directive (olm *Proteus anguinus*), and one priority habitat type according to Habitats Directive (HT8310: Caves not open to the public).

By listing and addressing the main causes of their decline in Natura 2000 Kočevsko area (SPA Kočevsko, SAC Kočevsko), the goal of the project was not just to reduce the decline but to stop the decline by taking appropriate measures.

#### Specific objectives of the projects were:

- The elaboration of measure plans including active conservation measures and their implementation into the existing sectoral management plans;
- The determination of target species distribution and conditions of their habitats, establishment of management zones;
- The implementation of concrete measures and improvement of the target species' habitats to meet their ecological demands;

- The reduction of human disturbance in the target species' habitats;
- The cleaning of karst caves and improving the habitat conditions for *Proteus Anguinus*;
- Establishing the info room (the Eagle room) and the educational trail (the Eagle trail);
- Trainings and education workshops for targeted sectors (forestry, game management and others);
- Raising awareness about issues affecting targeted species, and promoting the project.

### Socio-economic context

Despite numerous communicational activities when establishing Natura 2000 network in Slovenia, the socio-economic benefits for local communities remain not fully understood and Natura 2000 network is often presented in a rather negative way. One of our main goals in the project was to reverse this paradigm and consequently raise the general awareness about the potential socio-economic benefits that Natura 2000 network can provide to local communities.

To supplement concrete actions, a series of meetings and workshops and a variety of promotional activities about the project influenced local communities by shaping their positive attitude to the activities undertaken in the field. Local service providers responded to a call for an open tender for multiple project activities (forestry work, equipment manufacture and installation, didactic aids and models manufacture, nature trail building and others) and thus supplemented their income.

It has been already noticed and seen that as a result of these activities, the community attitude towards the project, Natura 2000 areas and nature itself changed and it is more favorable. Project actions have been also better accepted and supported. We hope that also in the long run, people will recognize Natura 2000 areas as sustainable development opportunities.

### Expected long-term results

Expected long term results are to sustain favorable conservation status of the six target species and one target habitat type which were successfully achieved through increasing deadwood amounts for woodpeckers, leasing 28 ha of private forests and 300 habitat trees, implementing specific silvicultural work and establishing quiet zones for forest grouse on ca 1794 ha, cleaning seven water caves, establishing winter feeding ground for the white-tailed eagle supported by the surveillance system, building three observation towers, establishing educational nature trail with information boards and models as well as the Eagle room.

Expected longer term results are also increased public awareness about nature conservation and sustainable development opportunities.

Furthermore, field surveys of the distribution and habitat conditions of target species, the implemented measures and the assessment of their impact will be the key inputs for upgrading the management zones and management system for the target species and the habitat type. The upgraded management zones and specific measures for the target species will be integrated into the existing sectoral plans for forestry and game management, which will ensure their long term implementation. Among other long term results, there is also a high applicable value of the implemented activities in connection to regular work of foresters and hunters (instructions, handbooks, manuals).

In Kočevska Reka, the ground has been set for the development of tourism infrastructure and the implemented public facilities have already been frequently used and visited. On a local level, an initiative was put forward for a *Decree of Protection of Reško Lake* with an aim to further protect and control the area.

Knowledge gained from the project will contribute to the implementation, update and development of several sectoral policies and legislation, in particular nature conservation, environment, forestry, game management and agriculture.

For the first time in Slovenia, a feeding station for birds of prey followed by a surveillance system for birds of prey, which provides a control over the nest, has been established and in future this will serve as an example to other surveillance systems.

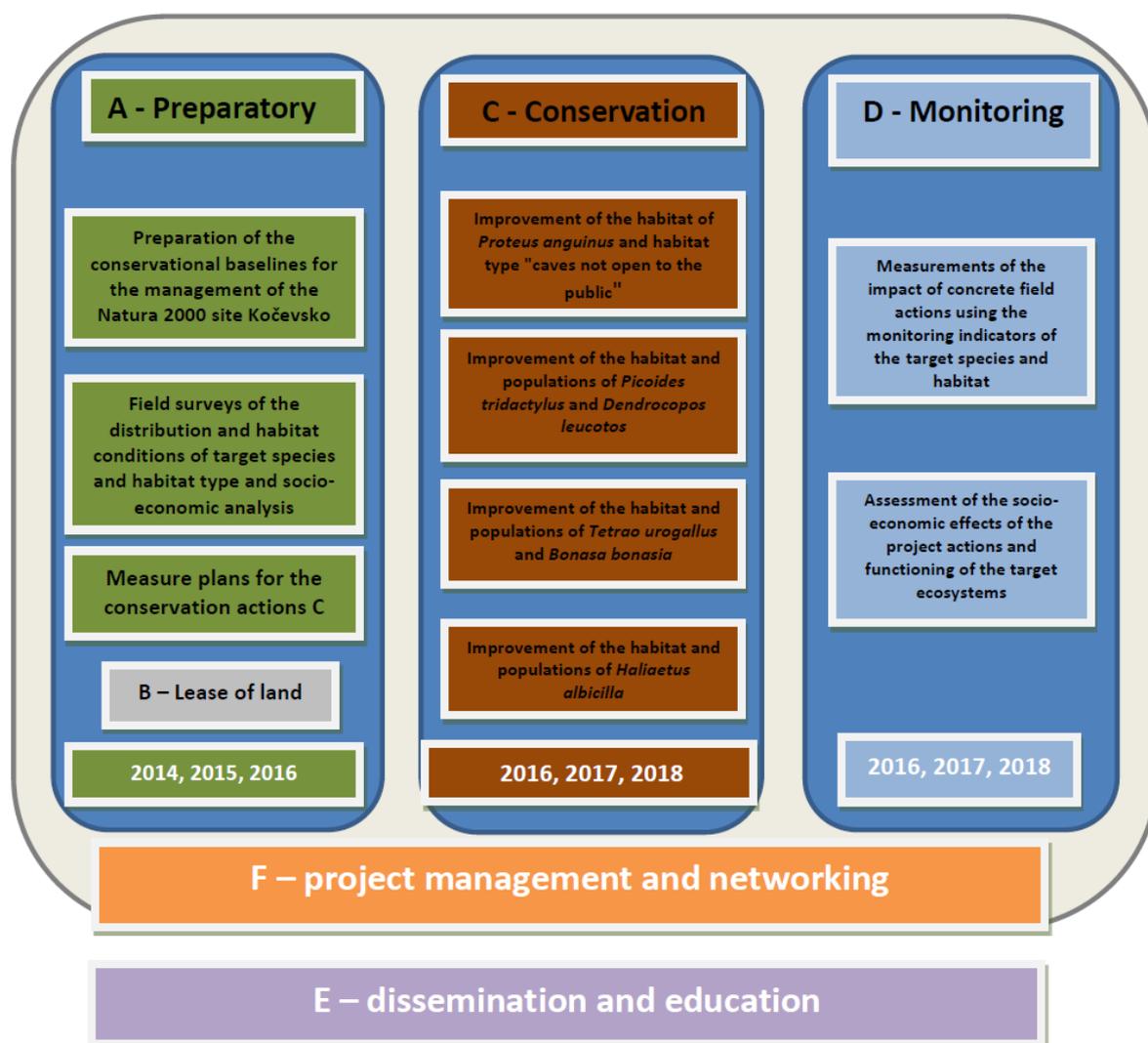
Besides all that, new working groups have been formulated on a national and local level to discuss existing issues and suggest possible solutions in regards to excessive and uncontrolled use of manure in agriculture in the Karst region. This presents a starting point to possible changes in the national environmental policies or even changes in legislation and in a long term contributes to the sustainable development.

We are also proud to report that in 2018 the only pair of white-tailed eagle successfully bred and delivered two offspring.

## 4. Administrative part

### 4.1 Description of the management system

The project was divided into three phases. It started with the preparatory actions, followed by the concrete conservation actions and the third phase was the monitoring phase. During the monitoring phase, the concrete conservation actions were measured through monitoring indicators of the target species and their habitats. To reach the objectives and success of the project the dissemination activities, awareness raising, networking and overall management of the project were equally important.



The project was implemented by the coordinating beneficiary (CB) Municipality of Kočevje together with three associated beneficiaries (AB): Slovenia Forest Service (ZGS), The Institute of the Republic of Slovenia for Nature Conservation (ZRSVN), and People's University of Kočevje (LUK). In December 2018, the registration number of the People's University of Kočevje was removed from the Register due to the merger agreement between People's University of Kočevje (LUK) and the Kočevje Business Incubator (PIK). The Kočevje Business Incubator (PIK) acquired a role of an associated beneficiary after the merger. The merger agreement was approved by the municipal council of Kočevje on 26 October 2018. The change of the project's associated beneficiary was formalized by amending the Grant Agreement. The Amendment to Grant Agreement was approved and duly signed on 11.2.2019 (Annex 7.1.1).

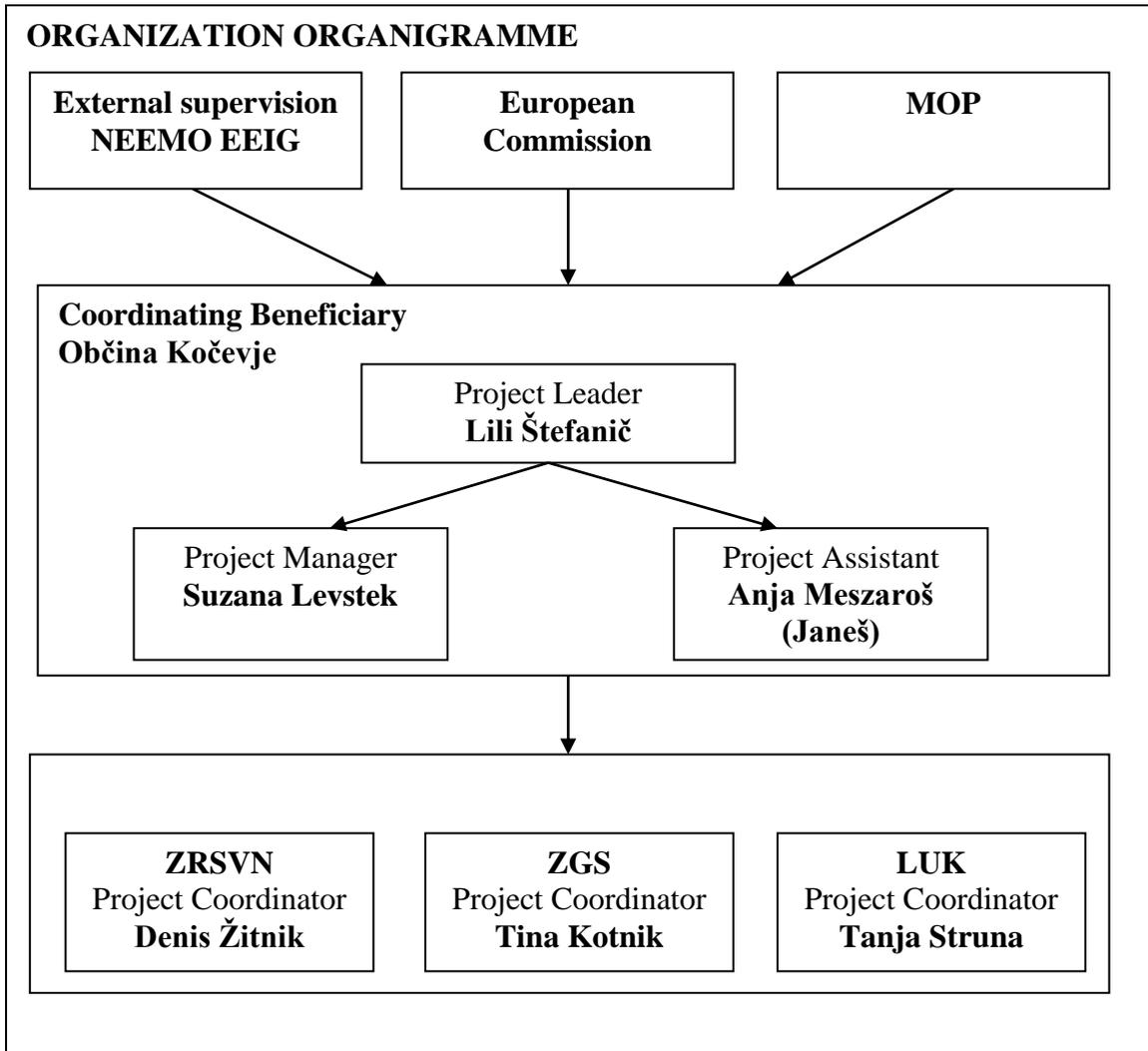
The changes set in the amendment are as follows:

The grant agreement LIFE13 NAT/SI/000314 has been modified as follows:

- (1) The name (People's University of Kočevje), legal status (public body) and VAT number (No. SI57553718) of the associated beneficiary People's University of Kočevje as set out in annex I to the grant agreement changes and becomes Kočevje Business Incubator, public body, VAT No: SI36173673. All the commitments of this beneficiary remain as specified in annex I to the grant agreement.
- (2) The associated beneficiary People's University of Kočevje as set out in the annex I to the grant agreement withdraws from 10/12/2018 and is replaced from 11/12/2018 by associated beneficiary Kočevje Business Incubator which assumes the commitments included in Form A4. Any reference to People's University of Kočevje in the grant agreement shall be understood as a reference to Kočevje Business Incubator.

The new associated beneficiary - the Kočevje Business Incubator (PIK) carried on with the project's activities as planned from 11. December 2018 until the end of the project. Project staff working on the project LIFE Kočevsko were given annexes to their existing contracts including a clause about the merger. After the merger, a new partnership agreement has been signed between the coordinating beneficiary and the Kočevje Business Incubator (Annex 7.1.2).

The partnership agreement contracts with other project partners had been signed at the beginning of the project and submitted to the European Commission as annexes to the Inception report. The partnership agreement contracts specify technical and financial participation of an individual partner. They are in accordance with the requirements of the LIFE+ mechanism. The contribution of each individual project partner was 20 % of the total value of the project. In the partnership agreements, the exact contribution of each partner was defined. The contract with the Ministry of Environment and Spatial Planning (MOP), the project co-financier, which amounted to 30 % of the project value, was signed on 14.7.2015. The contract was submitted to the European Commission as an annex to the Midterm Report.



The tasks of the project leader included communication with the European commission and the external monitoring team, issuing partnership agreements, adjustment of partnership agreements, making necessary agreements for carrying out actions, presenting the project and project's activities at conferences, local and national media.

The project leader was assisted by a project manager and a project assistant.

In April 2018, Suzana Levstek was appointed the project manager on a full time basis. The project manager overviewed the project technically and financially, was responsible for the compilation of project reports and monthly reports delivered to the external monitoring team. The project manager was also responsible and carried out the procedure required for the amendment of Grant Agreement. The project assistant was responsible for project administration and accountancy.

Every associated beneficiary appointed a project coordinator who communicated with the project manager. The coordinators were responsible for ongoing work of the project, they

actively participated at the meetings, compiled reports and overviewed the project's progress within their organisation.

External monitoring of the project was conducted by NEEMO EEIG, represented by Mr. Mitja Kaligarič, PhD. The external supervision provided help and assistance regarding the technical and financial management of the project.

We had five visits from the external monitoring team and from the co-financer, Mrs. Julijana Lebez-Lozej from MOP. The last monitoring visit was in September 2018 during which also technical and financial desk officers from Brussels participated and reviewed the project (Annex 7.3.3.1).

By ensuring an up to date progress of the project and for better monitoring of the activities, monthly reports on the progress were prepared and submitted to Mr. Mitja Kaligarič, PhD at the end of each month. The associated beneficiaries forwarded monthly reports in an electronic form to the coordinating beneficiary. The project manager reviewed the reports and compiled them into one report, which was forwarded to NEEMO EEIG.

Every three months all partners prepared financial and technical reports and submitted them to the coordinating beneficiary in electronic and paper forms. By following this model, we ensured timely monitoring of the use of the funds and controlled the documentation in order to fulfil the financial standards of the LIFE+ mechanism. Altogether, eighteen reports were delivered.

For better management of the project, two committees were established at the beginning of the project, namely steering committee – focusing on the financial management of the project and the quality board committee – focusing on the technical management of the project.

Steering committee was chaired by the coordinating beneficiary. The members were from the associated beneficiaries organizations. The committee was responsible for the financial planning and control, implementation of activities, it evaluated the project objectives and outcomes and performed a supervision of the financial use of funds. Altogether, there were ten steering committee meetings.

Quality board committee meetings, on the other hand, provided successful technical management of the project. They were chaired by the coordinator of AB ZRSVN Denis Žitnik. Its members were experts from the project partner organizations. When necessary, external experts for a specific area were invited to meetings as well. Altogether, there were eleven quality board meetings.

Committee meetings were supplemented by regular, monthly meetings of project partners, where partners of all member organizations and occasionally external experts participated. Every project partner was reporting individually on the progress and the plan for future

activities. Since the Second Progress Report there were seven additional meetings of project partners (Annexes 7.3.3.2, 7.3.3.3, 7.3.3.4, 7.3.3.5, 7.3.3.6, 7.3.3.7, 7.3.3.8).

For all project expenditure, each project partner was keeping appropriate documentation. After the end of the project, the documentation will be stored at the coordinating beneficiary's headquarters. All the documentation including tenders, invoices, travel orders was labelled accordingly with LIFE + mechanism rules including a reference to the project LIFE Kočevsko LIFE13 NAT/SI/000314.

The Final report is the fifth report on the project. The Inception Report was submitted on 31 May 2015 (Annex 7.5.1), the Midterm Report (Annex 7.5.2) on 30 November 2016, the First Progress Report (Annex 7.5.3) on 30 September 2017, and the Second Progress Report on 31 May 2018 (Annex 7.5.4).

## 4.2 Evaluation of the management system

Each project partner fully committed itself to provide its own contribution to the successful implementation of the activities according to the project's grant agreement. A collaborative relationship between the project partners has been crucial for the project's success and undeniably contributed to the success of all implemented activities. All the objectives of the project have been reached, on many occasions additional activities and actions were carried out and added extra value to the project.

On a monthly basis, reports containing updates on the project were submitted to the external monitoring team via email. Feedbacks received from the external monitoring team as well as feedbacks from EC (Annex 7.1.3) in regards to delivered reports or monitoring visits were taken into consideration and overall helped to improve the quality of the project results.

## 5. Technical part

### 5.1. Technical progress, per task

#### 5.1.1. Actions A: preparatory actions, elaboration and management plans and action plans

##### Action A.1

##### Preparation of the conservational baselines for the management of the Natura 2000 site Kočevsko

Name of Deliverable	Original deadline	Actual implementation	Implementation status
Analysis of the sectoral databases and sectoral plans	01/12/2014	31/05/2015	Completed
4 SWOT workshops	31/01/2015	31/05/2015	Completed
Harmonised conservation baselines for the management of Natura 2000 sites Kočevsko	28/02/2015	31/05/2015	Completed

A detailed assessment of the initial status of the project area was conducted (Annex Inception report 7.2.1). All relevant sectoral management plans (forestry, game management, nature conservation, fishery, water, spatial planning and development plans, proposed agri-environmental measures from RDP 2014-2020, etc.) and demographic data were analysed. After defining the key sectoral stakeholders, meetings were held (with foresters, hunters, anglers, agriculture advisors, key forest owners, etc. – 122 people attended) in order to prepare the sectoral analysis.

The key analysed data was presented to the stakeholders at three sectoral (forestry and hunting, fishery, spatial planning) and one general workshop (Annex Inception Report 7.2.2). SWOT workshops were proposed in the project application, but after consulting with an external contractor, we modified the workshop method to be more suitable for the project area and objectives. In the general workshop we established a proposal for intersectoral network of the key stakeholders (*Forum for Kočevsko*) which would cooperate in Natura 2000 Kočevsko area decision making and promote the key project activities in a broader region. For technical assistance in organizing and executing workshops external contractor was hired.

After workshops concluded and with the key stakeholder's feedback, *Conservation baselines for management of Natura 2000 Kočevsko sites* were elaborated (Annex Inception Report 7.2.3). Conservation baselines specify goals and measures set in Natura 2000 Management Programme for the period 2015 – 2020. Management zones for target species were upgraded

and active conservation measures for individual sectors were defined. Conservation baselines presented basic guidelines for further work on the project implementation.

The idea behind “*Forum for Kočevsko*” was to establish an expert panel of key stakeholders with counselling function, who would meet regularly and be a part of a decision making process. We soon realized that some of the stakeholders did not have time and interest in participating in these kind of meetings. Furthermore, we also found out that the majority of topics in these meetings would be forestry related and others stakeholders would feel unimportant. For this reason, we abandoned the idea of “*Forum for Kočevsko*” and did quite the opposite. Instead of meeting all the key stakeholders at the same time, we convened with different stakeholders separately, depending on the topic, problems or sector. This approach enabled us to interact with them individually and proved to be very successful and result oriented.

## **Action A.2**

### **Field surveys of the distribution and habitat conditions of target species and habitat type and baselines of the socio-economic analysis of the Natura 2000 sites Kočevsko**

<b>Name of Deliverable</b>	<b>Original deadline</b>	<b>Actual implementation</b>	<b>Implementation status</b>
Two education courses for 4 target bird species	31/03/2015	19/05/2015	Completed
4 technical reports about the baseline status of the target species and habitat type	31/08/2015	29/02/2016	Completed
Completed database of the target species and caves pollution	31/08/2015	29/02/2016	Completed
Baseline study about the socio-economic status of the Natura sites Kočevsko	31/08/2015	09/02/2016	Completed

The baseline census of the five target species and the target habitat type were conducted and the analysis of the baseline socio-economic state was carried out. Before field surveys began, a series of specific workshops (Annex Inception Report 7.2.4) (educational courses about target species, their ecological demands, census methods) for foresters and hunters were organized either by the project staff or by the subcontractors specialized in the target species. Some of them later actively participated in field surveys.

In regards to the habitat type HT8310: Caves not open to the public, 90 caves had been located followed by a survey about the contamination of the selected caves.

The speleologists from JK Novo mesto carried out the inventory of 15 % (cca. 90 caves) of all registered caves in NATURA 2000 Kočevsko, which were believed to have been contaminated.

Locating the caves and cave contamination document “*The Final Report on the Census of Pollution of 90 Caves in Kočevje region*” was published (Annex Midterm Report 7.2.2). In the census, also the amount of waste was assessed as well as their age and structure. It was found out that out of 90 examined caves only 23 were without waste, and there was further estimation that there was between 1300 – 2100 m<sup>3</sup> of waste located inside the caves. This was the second census of pollution of caves taken in Slovenia and presents a good basis for further rehabilitation of caves.

For the biological inventory with emphasis on *Proteus anguinus*, the project proposal envisaged an innovative genetic method for biological inventory. During the preparation of the action implementation, the experts suggested to use semi-quantifying method called “kick sampling”. We decided to use this method because it provides better results (genetic method is still not enough developed that it could provide undisputed results and is still cost ineffective).

The sampling for the biological inventory was carried out in three different seasons in selected caves and water springs (Annex Midterm Report 7.2.1). Analyses have shown that the composition of taxa in individual caves mainly depends on the level of pollution of the water body. *Proteus anguinus* was found only in Velika Stankova cave.

In samplings performed for the survey of water chemistry, parameters were captured, which can roughly determine the sources of pollution. The selected parameters were the water temperature, conductivity, pH, oxygen saturation and the concentration of the following chemical elements: Ca, Mg, nitrates, sulphates and chlorides.

Samplings were carried out four times (spring, summer, autumn and winter), and they offer an insight into the annual dynamics of water status and the potential impact of anthropogenic factors throughout the year. In order to get the insight into the temporal variation of water temperature, level and two sensors Conductivity temperature depth - CTD Divers were used in two caves.

The state of the caves in the Kočevsko region was presented to a local public (annex Midterm Report 7.1.4)

### **Target bird species:**

For two target species of woodpeckers (*Dendrocopos leucotos* and *Picoides tridactylus*), census was carried out simultaneously throughout the project area at over 300 points. Most points were surveyed by employees of ZGS and ZRSVN and additional 99 by subcontractor

DOPPS – Bird Life Slovenia. Each point was visited twice. For better understanding of the habitat requirements of the two woodpecker species we extended the baseline census with the analysis of habitat characteristics such as the amount of dead wood, forest growth stage and tree age comparing occupied sites with those where territorial pairs were not recorded. Both reports were published on the project website (Midterm Report\_Annex 7.2.1). Findings of this action provided the information on which we based our recommendations for short term and long term management changes included in the Implementation plans (Action A.3).

The census for capercaillie was carried out by the Slovene hunting association at 89 transects by looking for tracks and by morning survey of leks. 32 surveyors examined a total of 294 km of tracks but did not record any males or females (Annex Midterm report 7.2.1). They did record four signs of presence (female bird flight, tracks in the snow, faeces or cigars). Incidentally one active lek was recorded where faecal samples were collected and stored for future DNA analysis (non-invasive genetic sampling). On that lek we latter confirmed a presence of a female.

We invested extra effort in finding active leks by placing dust bathing sites at former leks and filming activity using camera traps. We recorded potential predators but did not record any of the capercaillie. A short educational video was produced and published on youtube (Annex Midterm Report 7.3.12.)

Hazel grouse was surveyed by DOPPS-Birdlife international using two methods: tracking in snow and playback of territorial calls at 190 locations. A total of 12 territories were recorded in systematic survey and 8 incidentally (Annex Midterm Report 7.2.1). DOPPS estimated the location in Natura 2000 Kočevsko to be between 50-100 individuals.

In order to examine the pressure of predation of grouse nests we set up an experiment with simulated ground nests in vicinity of wildlife baiting sites. These sites had been proven to increase the risk of depredation of ground nests by attracting wild boar and other predators. The results showed a high risk of depredation of ground nests with the main predators being martens and not wild boar as it had been previously expected. A short educational video was produced and published on youtube (Annex Midterm.Report 7.3.11).

The census for the white-backed woodpecker was systematically carried out using playback method at 194 sites and was confirmed at 28 sites and in addition at 8 incidentally found locations (Annex Midterm Report 7.2.4). Population density was calculated to be 0.2 territorial pairs / km<sup>2</sup> which gave an estimate of 40-50 pairs in Natura 2000 Kočevsko. The census for the three-toed woodpecker was systematically carried out using playback method at 180 sites (Annex Midterm Report 7.2.5). The presence of this species was confirmed at 25 systematically surveyed points and at additional 5 incidentally found locations. From our results we estimated population density to be 0,2 territorial pairs / km<sup>2</sup> which gave an estimate of 30-40 pairs in Natura 2000 Kočevsko.

Feeding habitat of the single pair of the white-tailed eagle in Natura 2000 Kočevsko was also examined and the suggestions for the improvements were given by an external expert on raptors Al Vrezec, PhD (Annex Midterm report 7.2.1).

In this very extensive action a considerable amount of data was obtained for each of the target species.

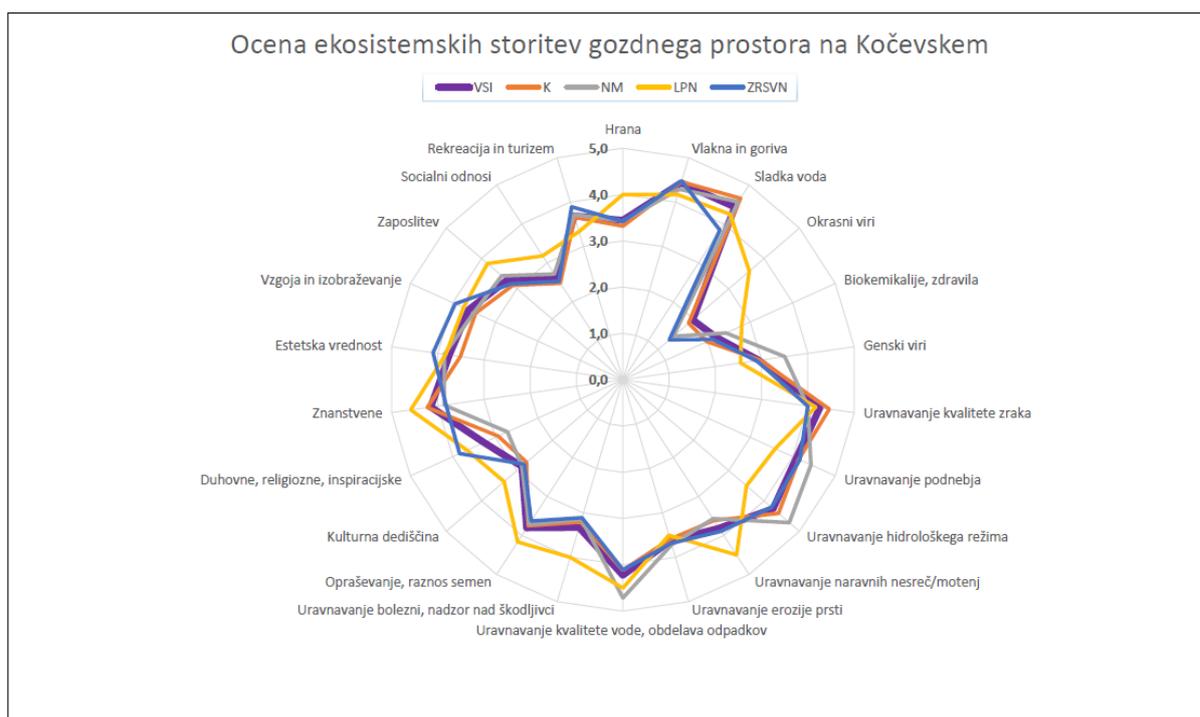
### **The socio-economic study**

After we gathered socioeconomic data in action A1, the baseline study about the socio-economic status of the Natura 2000 sites Kočevsko was elaborated (Annex Midterm Report 7.2.3). One of our main goals in the project was to raise the awareness about potential socio-economic benefits that Natura 2000 network can provide to local communities.

The structure of the study was twofold:

(1)

In the document “*Baseline study about the socio-economic status of the Natura 2000 sites Kočevsko*” we identified key ecosystem services of forests in the project area. The goal was to obtain an overall view of the entire range of services provided by forests in the area, including an initial assessment of their relative importance. This was the first valuation of forest ecosystem services in Kočevska region. To conduct this analysis we followed adjusted method published in “*Assessing Socio-Economic Benefits of Natura 2000 - A Toolkit For Practitioners*”, developed by the Institute for the European Environmental Policy in the project “*Financing Natura 2000: Cost estimate and Benefits of Natura 2000.*” In the first part of the analysis, we presented the project area, its key demographic indicators, forest ecosystems and key ecosystem services provided by forests in the area. In the second part of the analysis, we presented the results of a survey between forestry and nature conservation experts working in the project area, in which respondents evaluated the individual ecosystem services of forests in Kočevsko. The survey was completed by a total 88 people. The highest score was attributed to regulating services (3.9), followed by cultural (3.4) and provisioning services (3.2).



(2)

In January 2016, a public awareness survey was conducted in cooperation with external contractor Parsifal SC d.o.o. to assess the attitude of the general public living in the project area towards nature conservation, the preservation of the biotic diversity, and how informed they were on the project.

In Action D2, the survey was repeated in order to determine whether the project had contributed to positive social and economic outcomes in the area and how stakeholders and local residents perceived the benefits of the project. The key findings of the survey were presented in the report (Annex Midterm Report 7.3.14).

### Action A.3

#### Preparation of the measure plans for the conservation actions C

<b>Name of the deliverable:</b>	<b>Original deadline</b>	<b>Actual implementation</b>	<b>Implementation status</b>
Conservation measures implementation plan for the white tiled eagle	31/10/2015	31/03/2016	Completed
Conservation measures implementation plan for the three toed woodpecker and white backed woodpecker	31/10/2015	31/03/2016	Completed
Conservation measures	31/10/2015	31/03/2016	Completed

implementation plan for the capercaillie and hazel grouse			
Conservation measures implementation plan for the rehabilitation and limited access to caves	31/10/2015	31/08/2015	Completed
Upgraded information system about the forest management plans	31/10/2015	31/03/2016	Completed
Upgraded cave cadastre including data about cave pollution (90 caves)	31/10/2015	31/08/2015	Completed

A core zone for each species was established based on habitat requirements. For the white-backed woodpecker the core zone covers 21.299 ha of forest with standing stock higher than 150 m<sup>3</sup>/ha and more than 30 % of beech. The core zone for three-toed woodpecker covers 16.648 ha of mainly conifer forests above 800 or 900 m above the sea level. The suggested conservation measures were reviewed in the light of the recently accepted Natura 2000 Management Programme for Slovenia for the period 2015-2020 (LIFE11 NAT/SI/880) and locations for short and long term conservation measures were suggested. The implementation plans for both woodpecker species were combined in a single document (Annex Midterm Report 7.2.6).

The implementation plans for both grouse species were combined in a single document and core zones were identified (Annex Midterm Report 7.2.7). The core zone for hazel grouse encompasses 34.170 ha of forest and open ground including confirmed territories, growth stage of the forest with high percentage of spruce. For capercaillie the core zone covers 3.813 ha within which we outlined central lek areas covering 1.794 ha which are especially important for conservation. Suggested locations for all conservation measures were discussed with regional foresters and hunters and were included in the implementation plan.

The implementation plan for the white-tailed eagle included information on the location of three observation towers, feeding ground, digital surveillance of the nest and feeding station, water barrier and wooden fence (Annex Midterm Report 7.2.8).

The information system of the forest management plan was upgraded by including the codes and records of a specific conservation measure for Natura 2000 species and is valid on a national level (Annex Midterm Report 7.2.11).

Six plans for the cleaning of the selected caves (Annex Midterm Report 7.2.9) were prepared by an expert speleologist with an estimation that the total amount of waste in the selected six caves was around 120m<sup>3</sup>. An upgraded cave cadastre including data about cave pollution (90 caves) is available on the website: <http://www.katasterjam.si/> (Annex Midterm Report 7.2.10).

## Action B.1

### Lease of land

<b>Name of the deliverable:</b>	<b>Original deadline</b>	<b>Actual implementation</b>	<b>Implementation status</b>
The database of eco-cells	31/07/2016	30/04/2017	Completed
The database of the selected habitat trees	31/07/2016	30/04/2017	Completed
Leasing contracts for the eco-cells	31/07/2016	30/04/2017	Completed
Leasing contracts for habitat trees	31/07/2016	30/04/2017	Completed
Inscription of the lease rights in the land cadastre	30/04/2017	Will not be implemented	Will not be implemented

With the help of regional foresters ZGS and in a close collaboration with the forest owners we carried out a project action that resulted in a lease of 300 appropriate habitat trees for the period of 20 years (Annex First Progress Report 7.1.2). The trees were mainly selected in the white-backed woodpecker zone that covers the area of 9 forest management units. ZGS signed contracts for the lease of 300 habitat trees (Annex First Progress Report 7.1.3) with 13 forest owners in exchange for a compensation of 100 € per tree. In order to identify habitat trees in the field, we selected areas with high proportion of privately owned forest and prepared a key for identification of habitat trees to help regional foresters with identification of habitat trees (Annex Midterm Report 7.2.16).

The trees were marked with an appropriate tree marking paint, a database of habitat trees was established (location and description of the habitat trees) and all the data was registered in the GIS system (Geographical information system).

After providing a field inspection and an expert assessment of several different privately owned forest areas in the Natura 2000 Kočevsko region it was found out that forests in the vicinity of the Nežica watercourse) met all the required criteria. The wider area of the Nežica watercourse had been suggested to become a forest reserve in Kočevje, though this was not a reason why it had been chosen. The action plans proposed the exclusion of 20 ha of eco-cells. However, in cooperation with the forest owner we have managed to outline and lease 28.98 ha of forest in one piece. This area will be left to develop naturally for a period of 20 years. Within the framework of the project we signed the contracts (Annex First Progress Report 7.1.6) for the release of parts of the biotopes, i.e. eco-cells, with 7 forest owners. On these basis, we have also created a database and entered relevant data into the GIS system.

During the project we realized that the registration of the lease rights in the land cadastre for the parts of good quality forest or for habitat trees is not permitted and the forest owners did

not consent to the registration of entire forest plots. Therefore, lease contracts were not registered in the land cadastre.

### 5.1.2. Actions C: Concrete Conservation Actions

#### Action C.1

#### Improvement of the habitat of *Proteus Anguinus* and habitat type "caves not open to the public"

Name of the deliverable:	Original deadline	Actual implementation	Implementation status
6 technical reports about the cleaning of the caves	30/06/2017	30/08/2017	Completed
6 wooden barriers on the caves entrances	30/09/2017	30/08/2018	Completed
14 notice boards by the caves entrances	30/09/2017	30/11/2017	Completed
Information board by the Željnske jame cave	31/08/2018	31/01/2019	Completed

By cleaning polluted water caves, setting up wooden barriers at the entrances to the caves (to prevent new deposits of waste into the exposed caves), and by erecting the notice boards, the project managed to successfully reduce further littering of the caves. Besides that, the implemented measures contributed to the improvement of the quality condition of groundwater on key locations of the project site and consequently to the habitat of *Proteus Anguinus*.

Altogether seven caves have been cleaned: Scaffeloch, Vodna jama 1, Vodna jama 3, Mala Stankova jama, Oneška jama, Smetljiva jama and, additionally, cave Muellerloch. A total of 165 m<sup>3</sup> of waste was collected and removed from the caves.

The project's application proposed a cleaning of six water caves. Only after a certain cave had been actually cleaned, the exact amount of waste in a cave could be determined. After the first cleaning action, the amount of waste in certain caves was not as substantial as it had been foreseen and this allowed us to proceed with cleaning an additional cave and adding extra value to the project and its activities. The seventh cave was cave Mullerloch, located along the regional road. After the cave had been cleaned, the amount of waste accumulated in cave Mullerloch was immense. The total amount of waste collected from this cave was 80 m<sup>3</sup> or 42.380 kg.

Since the cave Mullerloch is located too close to the regional road any fences, except the road safety fence, would pose a threat to the traffic. We did not get a consent from the Directorate for Infrastructure of the Republic of Slovenia to install a wooden or stone fence. We asked them to secure this section and a road safety fence was set up in 2018 (Annex 7.2.1). The Vodna jama 1 cave near Klinja vas is in the immediate vicinity of the road, at a slight curve, and therefore hidden from view from Klinja vas. This makes the cave particularly exposed to the danger of illegal littering, as people can easily dispose waste directly from their vehicles. We set up a fence from the meadow side, and in order to completely prevent dropping waste into the cave, we additionally decided to raise the existing road safety fence by one level (Annex 7.2.2).

At the entrances to the caves, 14 notice boards were placed informing the public that waste dumping in nature is prohibited. A report on setting up the fences had already been delivered with the Second Progress Report (Annex Second Progress Report 7.1.3). Because of extensive damage in the forest due to windfall, the access to some caves was limited or completely obstructed at the time of delivering the Second Progress Report and we could not take the photos of all the boards. Eventually we managed to access all the caves and the photos of all 14 boards are now additionally included in the report (Annex 7.2.3).

Along with 14 notice boards, an information board was set up at Željnske cave. The location of the board is on the parking place, before the trail that leads to the caves (Annex 7.2.4). The info board will correspond to the other boards which will be set up in the area around Željnske cave in the scope of renewal of the boards along Željnske cave.

As an addition to the project, we launched an initiative with the Ministry of the Environment and Spatial Planning to provide funds for cleaning additional caves in the Kočevsko area. The ministry replied that funds from the national budget were not available for this purpose. They further noted that they were aware of the issue, which is why an amendment to the Environmental Protection Act specifically regulating the responsibilities and the rehabilitation of polluted areas had been drafted and submitted for public hearing in 2017.

*Proteus Anguinus* is one of the most remarkable representatives of stygofauna in Slovenia and probably in Europe. Emissions from agriculture and wastewater effluents pose a threat to the existing population of this neotenic amphibian and its habitat. In order to reduce the threat that nitrates pose to the proteus, an external expert prepared a study entitled *Assessment of the Risk Posed by Nitrates for Groundwater Ecosystems and Proteus Anguinus in the Project Area of LIFE Kočevsko* (Annex Second Progress Report 7.1.6). In the scope of this study, we identified relevant sources of nitrates in the groundwater. We calculated the threshold nitrate concentration for groundwater as a habitat of the proteus. Based on our results, we proposed possible risk mitigation measures to reduce the impact of nitrate to the groundwater.

Intensive fertilization of arable land in the Kočevsko poses a significant risk for groundwater quality and groundwater fauna, such as *Proteus Anguinus*. During our sampling of groundwater quality in one of the water caves, we found substantial pollution from liquid

manure. In accordance with the previous agreement between IRSNV, Inspection services and the Police Department, the IRSNC informed the Ljubljana Criminal Investigative Department and the Kočevje Police Department, as well as Agriculture and Environmental Inspection Service about the pollution (Annex Second Progress Report 7.1.59). Criminal investigation is still ongoing.

Because of our constant warnings about bad agricultural practices in Kočevsko and other Karst areas in Slovenia, the Ministry of the Environment and Spatial Planning organized several expert consultations (outside our LIFE project), which were also attended by LIFE Kočevsko team members.

**Action C.2:**

**Improvement of the habitat and populations of *Picoides tridactylus* and *Dendrocopos leucotos***

<b>Name of the deliverable:</b>	<b>Original deadline</b>	<b>Actual implementation</b>	<b>Implementation status</b>
Established network of eco-cells with measures	31/10/2017	31/09/2018	Completed
Established network of eco-cells without measures	31/10/2017	31/09/2018	Completed
Thinning of trees with tree griddling on the 200 ha	31/10/2017	31/09/2018	Completed
Completed information database of forestry measures	31/10/2017	31/09/2018	Completed

As per expert implementation plan (Action A.3 – Implementation plan for concrete actions in the area of white-backed woodpecker (*Dendrocopos leucotos*) and three-toed woodpecker (*Picoides tridactylus*) and with a help of regional foresters, the designated trees for girdling in the state forests were marked. Within the framework of the C.2 action, we marked the trees in 116 dislocated locations in the Natura 2000 Kočevsko area.

We have methodically selected the locations for girdling and marked the appropriate trees in the border zones of the newly created eco-celles (in the area of 100 ha) as well as individual thicker and mature trees on the forest areas in reinitiation stage (1,500 m<sup>3</sup> of trees left to develop naturally). We had also chosen the trees for sanitation cutting to protect the adult trees in the pole stage (with DBH between 10 to 30 cm) as well as selected appropriate pole trees for girdling in the area of 200 ha.

In the area of Natura 2000 Kočevsko we removed 101.92 ha of eco-cells, leaving the forests in those areas to their natural development. 33.71 ha of new eco-cells were removed as hard shoulders along the edge of the Pragozd Strmec (OE Kočevje) reserve, and 68,21 ha of eco-

cells were removed in the area of Kočevski Rog (OE Novo mesto). Thicker and older B and C thickness type deciduous trees on the hard shoulders of the newly removed eco-cells (on an area of 100 ha) were ring-barked, which will affect their strength and accelerate their withering. The same was done to stands in regeneration. By implementing this measure we left 2,770.71 m<sup>3</sup> of trees to their natural development (Annex Second Progress Report 7.1.11).

The marking of pole-phase stands in development with ring-barking in carefully chosen parts of the forests was followed by the marking of a total of 200 ha of forest areas, of which 37.89 ha in the Novo mesto Regional Unit area and 162.11 in the Kočevje Regional Unit (Annex Second Progress Report 7.1.12).

Due to the interest and lack of information on the nutritional habitats of the two types of woodpeckers, we selected a contractor for the habitat research of both bird species. The purpose of the research was to define the nutritionally most suitable types of trees, to compare different tree species and their rates of disintegration, and to prepare recommendations for management and monitoring of the feeding base for white-backed woodpecker.

The analysis and report on the dietary base of the white-backed woodpecker (*Dendrocopos leucotos*) by dr. Al Vrezec with his team of co-authors (Annex Second Progress Report 7.1.13) show, for the first time, the importance of valuing trees from the point of view of the dietary base of the white-backed woodpecker. This report marks the beginning of researches on the dietary base of the white-backed woodpecker as a key indicator of forest conservation, similar to xylophagous beetles. We can conclude that without sufficient knowledge about this aspect of biodiversity and without considering this very biodiversity in forest management, long-term conservation of the white-backed woodpecker is not possible.

### **Action C.3**

#### **Improvement of the habitat and populations of *Tetrao urogallus* and *Bonasa bonasia***

<b>Name of the deliverable:</b>	<b>Original deadline</b>	<b>Actual implementation</b>	<b>Implementation status</b>
20 road barriers, 20 traffic signs, 20 traffic boards	31/10/2017	31/12/2017	Completed
600 ha of quiet zones established	31/10/2017	31/10/2017	Completed
30 signposted feeding fences, 20 of them newly set	31/10/2017	28/02/2018	Completed
7500 seedlings planted	31/10/2017	31/05/2018	Completed
18 hunting objects removed	31/10/2017	28/02/2018	Completed

The activities in this action started first with preparatory field activities in the state forests. The work included several different activities. We had to mark the places for 20 feeding fences in the forest (OE Kočevje – 18 feeding fences, OE Novo mesto – 1 fence, OE Postojna – 1 fence) as well as locate the trees and shrubs for sanitation cutting on 44 dispersed locations where we intended to prepare the forest ground for clearings and sites for western capercaillie. Also 14 different locations (10.2 ha in total) for mulching of the road edges had to be chosen, clear-felled areas and flight corridors in the zone covering the central sites of the western capercaillie.

After the conclusion of the preparatory activities, we started building, placing and marking feeding fences in the forest. Twenty feeding fences have been placed in state-owned forests. All the feeding fences have visible markings to prevent birds from fatally hitting the fences.

Along with placing feeding fences on 20 locations in the Natura 2000 Kočevsko area, the terrain for the planting of forest-tree saplings was prepared. 7500 forest-tree saplings were planted in the fences (*Prunus avium*, *Sorbus aucuparia*, *Crataegus monogyna*, *Picea abies*, *Abies alba*, *Pinus sylvestris*) (Annex 7.2.5).

After finishing the implementation plans, we identified quiet zones for both grouse species. The quiet area designated for western capercaillie covers the central sites of this species, while the quiet zone for the hazel grouse had been established in consideration to the existing locations of territories of this species, indicated in the census of 2016. Quiet zone covers 1,794 ha and is almost three times larger than planned in the application form.

Forest ground preparation works were also carried out on marked sites (clear-felled areas, flight corridors) in western capercaillie habitats on a total of 44 remote locations. The mulching was carried out on 14 separate locations: 5.2 ha in privately owned forests in the Turn area, and 5 ha in state-owned forests (Annex Second Progress Report 7.1.17).

A document entitled »Study of the regime of the use of forest roads« (Annex First Report 7.1.21) was prepared and we selected the exact locations for installation of 20 road barriers with appropriate traffic signs (20 signs for traffic ban and 20 notice boards). After having received all the necessary approvals, a modified regime for the use of forest roads was introduced followed by the installation of 20 road barriers with the accompanying signs and resulting in the closure of 20 blind forest roads in Natura 2000 Kočevsko area.

Effective cooperation with special purpose hunting reserves (LPN) resulted in removing or relocating 21 previously selected plus three additional objects in the western capercaillie sites on the Natura 2000 Kočevsko area (Annex Second Progress Report 7.1.20).

We added extra value to the project to remove not only 18 as originally planned but 21 hunting objects.

## Action C.4

### Improvement of the habitat and populations of *Haliaeetus albicilla*

Name of the deliverable:	Original deadline	Actual implementation	Implementation status
2 digital cameras filming nest and winter feeding places	31/08/2016	31/12/2016	Completed
500 m of wooden fence for cattle	31/08/2016	31/11/2017	Completed
Floating barrier on the water surface	31/08/2016	5/05/2017	Completed
Winter feeding ground	31/08/2016	31/12/2016	Completed
Three observation towers	31/10/2017	31/10/2018	Completed
Re-directed pathways to observation towers	31/10/2017	31/12/2017	Completed

The implemented activities in Action C4 contributed to the improved habitat conditions of *Haliaeetus albicilla*. In the past, the nest of the white-tailed eagle had been exposed to direct and indirect human disturbances. The nest had been progressively affected by the exposed location as well as by the ever increasing presence of people. In order to limit the access to the upper part of the lake the illegal structures near the lake, used by the fishermen and photographers, have been removed. They have been replaced by three new paths (one of them is the educational trail) and three observation towers (Annex 7.2.6). For the practical reason, each observation tower has been given a name. “Quarry” observation tower is approximately a 20 minute walk from the main road and is meant for professional nature photographers. The tower is offering a scenic view over Reško lake and provides many opportunities for photos as well as for observing natural life in the area. The second observation tower is called “The Eagle” observation tower. With its construction, it actually resembles the eagle’s nest. It is located at the end of the educational trail, which has also been established within the project. The third tower is near the Reško lake, called “The Peninsula tower”. In size, this is the biggest observation tower of all three.

In the vicinity of each observation tower, three notice boards have been set up (Annex 7.2.7) giving information to people about the exact location of the tower and also reminding visitors that they are in a quiet zone. In addition to the previously mentioned notice boards and as a result of a positive safety examination of all three observation towers, which was also not originally proposed in the project’s application, three additional notice boards were set up directly on the observation towers (Annex 7.2.8). The architecture design of all three towers coincides very well with the surroundings. All three towers have been already regularly visited by different organized groups as well as general public and have received very positive reviews. The implemented measures will keep most visitors off the area where the white-tailed eagle is nesting but at the same time offer them areas to observe and photograph nature with a minimum disturbance to the white-tailed eagle.

The spot where the white-tailed eagle is nesting is situated to the north-west of Reško lake. The location offers a quiet space to the white-tailed eagle, although it is surrounded by forest roads and tracks. In order to increase public awareness and to prevent disturbances, we have set up appropriate signage on those locations, i.e. access points to forest roads, a total of three notice boards based on similar boards used in the case of the grouses.

To further prevent disturbance in the area, a water barrier has been placed on Reško lake and a 500 m long cattle fence has been placed in that same area to make sure that part of the lake remains quiet.

Both known nests of the white-tailed eagle located around Reško lake have been equipped with the video system for monitoring and controlling the white-tailed eagle at the site.

Winter feeding ground has been established. The feeding station is supplied from 1 December through 30 June. This is done exclusively by the special purpose hunting reserve LPN Snežnik-Kočevska Reka. We prolonged the action until the end of the project because of the need to regularly supply the feeding station.

A surveillance camera with photovoltaic cells at the feeding station allows us to monitor the situation at the site. Based on the footage we were able to confirm the presence of the white-tailed eagle in the area in years 2017, 2018 and 2019.

Daily monitoring of events in the wider surroundings of Kočevska Reka in 2016 has been carried out and a survey for the population in the surrounding area has been composed.

The results of monitoring and the survey had been presented in the document entitled »An overview of anthropogenic interference in the area of the Kočevska Reka lake« (Annex First Progress Report 7.1.29).

One of the indirect impacts of the project was also the reconstruction of a concrete dam on the lake which presents an additional measure for the active protection of the white-tailed eagle in the Kočevsko region.

### **5.1.3. Actions D: Overall project operation and monitoring**

#### **Action D.1**

**Measurements of the impact of concrete field actions using the monitoring indicators of the target species and habitats**

<b>Name of the Deliverable</b>	<b>Original deadline</b>	<b>Actual implementation</b>	<b>Implementation status</b>
Technical report about the effects of action C.1	30/06/2018	31/08/2018	Completed

Technical report about the effects of action C.2	31/08/2018	31/12/2018	Completed
Technical report about the effects of action C.3	31/08/2018	31/12/2018	Completed
Technical report about the effects of action C.4	30/06/2018	30/06/2018	Completed

By monitoring the indicators of the target species and their habitats, we determined the effectiveness of the measures taken in the C actions. At the same time, we were able to draw conclusions about the appropriateness of the implemented measures and consequently selected the most effective measures. The indicators showed us both the qualitative and the quantitative impact of the measures on the population of the species and their habitats (Annex 7.2.19, 7.2.20, 7.2.21).

In regards to grouse species, one of the most important indicators for them is lekking. DOPPS-Birdlife Slovenia was selected as an external contractor and the following activities have been implemented:

- An educational course about monitoring signs of winter presence of both grouse species,
- Winter tracking of signs of presence of both grouse species and
- Spring count on lekking sites. Target area for monitoring was determined on (a) former active lek areas and (b) locations where concrete conservation measures were implemented.

In regards to both grouse species, DOPPS concluded the winter tracking of signs of their presence (feces, snow tracks, feathers) in April 2018. On 203 km of transects, 11 territories of hazel grouse were confirmed, but no sign of capercaillie presence was registered at the time.

Spring count on lekking sites was carried out in May 2018 (Annex 7.2.11). Five core areas in capercaillie zone were chosen for census. In 10 morning census count days we did not manage to register any birds or signs of the presence of capercaillie. This suggests that the species is extremely rare in the area and is virtually undetectable with a normal time and energy input. Similar results have already been made by the previous census of 2015. At least some 100 specimens are needed to reach the viability of the population and with the current data a serious regional agreement and a shift in forest management in Dinarides is needed to further address this issue.

The efforts to capture and relocate hazel grouses took place on 78 locations. Bird-calling was successfully used to register the presence of the hazel grouse on seven locations, but on the other locations there was no response. According to these data, hazel grouses in the Kočevsko region live locally in areas that provide appropriate habitat and in concentrated numbers.

Regarding monitoring and updating our surveys of three-toed woodpeckers and white-backed woodpeckers in the Natura 2000 Kočevsko area we analysed the survey data and established the transects of survey points. The presence of three-toed woodpeckers was checked on 155 survey sites, and our findings have so far confirmed the presence of this species on 10 survey sites. The presence of white-backed woodpeckers was checked on 159 survey sites, and results have confirmed 17 survey sites.

In 2015, a sampling in five polluted and unpolluted caves and in one spring Radešca in Podturn was performed. Sampling was repeated in selected three caves and in the same spring after caves were restored in 2017. Caves were compared according to their biodiversity. We studied number of stygobionts related to number of nonstygobionts. We did analyses of presentation of subterranean fauna in individual caves, correlation of chemical parameters with number of taxa, number of taxa in relation to the distance among caves and which are potential contaminants of the underground waters in the studied area. We predicted in advance that sampling immediately after the physical cleaning of the caves will not be significantly reflected in the species richness and in the number of subterranean organisms. Analyses have shown that the composition of taxa in individual cave mainly depends on the level of pollution of the water body and microhabitat of each cave where sampling was performed. Faunal communities of caves are similar but some caves are very unique in terms of taxa. Caves differ in the number of taxa and diversity. Results were compared with the data from older records in the Cave cadastre of IZRK ZRC SAZU and Slovenian cave association and despite some differences in methodology of data collection we can conclude that our findings and conclusions of research are similar to those in literature. It was shown that subterranean fauna was depleted due to the anthropogenic impact (Annex 7.2.10).

Conclusions from 2015-2016 period regarding monitoring of water quality were mostly confirmed; however, based on new data (2018), some water catchment areas were extended (Mala Stankova jama, Vodna jama pri Cvišlerjih) or reduced (Remihov mlin). After Mala Stankova jama clean-up, habitat between Mala and Velika Stankova jama seems to be improved but some important anthropogenic pressures (mostly agriculture, de-icing with salt to less extent) still persist. Both regional springs (Bilpa, Radeščica) show much lower concentration of nitrates during repeated measurements compared to initial ones, which can not be solely a result of cave clean-ups. In some caves occasional problems related to agriculture (Vodna jama 1 pri Klinji vasi) or combination of agriculture and organically overloaded sinking stream (Rinže; Vodna jama v Šahnu) persist resulting in unfavourable conditions for *Proteus Anguinus*. We appraise that environmental activities helped to improve the understanding and protection of *Proteus Anguinus*, however, to achieve favourable habitat conditions, more radical measures are needed to further reduce the excessive impacts of agriculture, sinking Rinža River, and settlements with poorly developed (or absent) sewage treatment. The report on quality measurements has been delivered (Annex 7.2.9).

## Action D.2

### Assessment of the socio-economic effects of the project actions and functioning of the target ecosystems

<b>Name of the deliverable:</b>	<b>Original deadline</b>	<b>Actual implementation</b>	<b>Implementation status</b>
At least 30 interviewees with the members of the Forum Kočevsko	Not implemented	Not implemented	Not implemented
Study of the benefits of the Natura site Kočevsko	31/08/2018	31/12/2018	Completed

We prepared a study of the benefits of the Natura 2000 Kočevsko area, which includes an assessment of (1) the socio-economic impacts of the project actions and (2) the functioning of the target ecosystems (Annex 7.2.12).

(1) In the socio-economic study, we analyzed the socio-economic impacts of the implemented project activities on the local communities and the economy. The analysis aimed to evaluate how the project contributed to positive social and economic changes in the project area, and how stakeholders perceived the benefits of the project.

A part of the socio-economic study is focusing on the news jobs created and the jobs supported directly and indirectly by the project. To assess the impact of the project we used a combination of methods to analyse the project expenditure, the jobs created directly and, by means of multipliers, the incomes and jobs the project supported indirectly. We analysed information about the project expenditure and direct job creation, and investigated what multiplier effects occurred in terms of economy and employment. Geographical disaggregation of the expenditure was implemented to obtain a clear view of how and where the resources allocated for the project had been used.

By analysing the economic effects of the project, we wanted to show that nature conservation projects revitalize the local and regional economy, generate new jobs and create new business opportunities.

Analysis showed that every 100 EUR of expenditure of the project LIFE Kočevsko stimulated an additional 63.4 EUR of increased economic activity of suppliers and external services in the Slovenian economy (indirect effect). Both direct and indirect effects induced additional 95.0 EUR of output, as a result of the final consumption of households on total economy (induced effect). As much as 62.5% of the total output effect of the project has been generated in the local environment (the Kočevsko area).

Within the duration of the project, 43.36 direct jobs (project staff) were created. By using employment multipliers, we estimate that the project indirectly supported an additional 12.01 jobs (2.67 per year). As a result of the increased final consumption of households, an

additional 24.47 new jobs (5.44 per year) were induced. Overall, we estimate that the project LIFE Kočevsko (direct, indirect and induced effect) supported 79.84 new jobs, with the annual mean of 17.74 jobs.

Because we abandoned the idea about establishing “*Forum for Kočevsko*” (see action A1), we did not carry out 30 interviewees with the members of the Forum. Instead, public opinion survey was introduced. In January 2016 (action A2), we conducted a first part of the survey in cooperation with Parsifal SC d.o.o., to assess the attitude of the general public living in the target area towards nature conservation, preservation of the biotic diversity, and how informed they are on the project. In November 2018, the public opinion survey was repeated (Annex 7.2.13). The aim was to determine the success of the implementation of the communication/awareness raising activities of the project, and to check how the local communities perceived the benefits of the project.

Overview of the key findings of the survey:

- Majority (91.5 %) of the respondents feel nature preservation and keeping the nature intact is important (in 2016 this share was 93.3 %).
- Majority (75.2 %) of the respondents feel it is important to them, that society allocates resources for preservation of animal and plant species and their habitats (in 2016 this share was 75.8 %).
- More than half (56.7 %) of the respondents is familiar with the meaning of the term Natura 2000 (in 2016 this share was 61 %; Slovenian average is 29 %, EU average is 10 %).
- More than half (52.3 %) of the respondents consider Natura 2000 to be an opportunity for development, while almost a third (29.2 %) feel it only brings restrictions and limitations. The rest are undetermined (in 2016 those shares was 54 % and 31.7 %).
- Respondents’ awareness of the fact that they live in the Natura 2000 area is high (80.5 %) (in 2016 this share was 71.7 %).
- Majority (84.6 %) of respondents had no positive or negative experience related to living in the Natura 2000 area, while 12 % reported having negative and 3.4 % positive experience (in 2016 those shares were 78.1 %, 11.8 % and 10.1 %).
- Individuals who reported having either negative or positive experience were given follow up questions on the experience. The most common positive experience of living in the Natura 2000 area, reported by respondents were preservation of nature, animal protection and clean water. Most common negative experience reported by the respondents were construction limitations, poor accessibility, lack of roads, heightened risk of bear encounters, limiting economic activity in the region.
- 40.5 % of the respondents have heard of the LIFE Kočevsko project (in 2016 this share was 22.2 %).
- Respondents who have heard of it, mainly heard about it on the radio (30.3 %), read about it in national or regional printed media (26.7 %), heard it from family, friends

and acquaintances (22.1 %), on television (21.1 %), on the internet (17.6 %) and from public presentations (8 %).

- Majority of the respondents (93.4 %) did not attend a lecture or participate in the project activities related to nature in the Kočevska region.

(2) We evaluated direct connections between concrete project activities and key ecosystem services.

The purpose of the study was to determine the effects (benefits) of conservation measures carried out in the context of concrete project actions, on the performance of target ecosystems, to show the links between the implemented measures and their impact on the ecosystem services provided by the target ecosystems. Changes in the functioning of ecosystems can have a major impact on the economy and society in the present or in the future, and should therefore be taken into account when planning and decision making. The study highlighted the current benefits of ecosystems and at the same time showed the benefits that could be lost in the future due to unsustainable use of natural goods.

Ecosystem services that were influenced by the project actions:

- Significant positive influence: biodiversity/genetic resources, educational, recreation and tourism.
- Moderate positive influence: ground water for drinking, water purification, scientific, employment.
- Slight positive influence: aesthetic, hydrological cycle, spiritual/symbolic, social relations.
- Significant negative influence: /
- Moderate negative influence: /
- Slight negative influence: timber, game meat, game ornaments, recreation and tourism.

## Action F.2

### Networking with similar projects

Name of the Deliverable	Original deadline	Actual implementation	Implementation status
Excursion to National Park Bavarian forest	30/06/2015	17/10/2015	Completed
Excursion to National Park Risnjak and national park in BIH	30/10/2018	30/10/2018	Completed
Participation at two international conferences	31/12/2018	28/02/2019	Completed
Presentation of the project results at two international conferences	28/02/2019	28/02/2019	Completed

Considering the fact that LIFE Kočevsko is a demonstration project, there was an important focus was on the transfer of project good practices to other stakeholders and to other areas. We actively participated at numerous networking events, expert consultations and conferences and good practice field trips in Slovenia, Austria, Croatia, Hungary, Germany and Poland.

Networking events	Number of events	Number of participants
Expert consultations/conferences	10	772
Networking events	18	831
Good practice (training) field trips	2	74

In 2015, the project partners attended field training trip to Bavarian forest National Park in Germany (Annex Midterm Report 7.2.47). The purpose of this field trip was to obtain detailed knowledge about national park and Natura 2000 area management, environmental education and the development of tourist infrastructure. As our project strives for an integrated management with stakeholders' involvement, all the key stakeholders from different sectors and organizations joined us on our field trip. The field trip was an opportunity for networking, transferring knowledge, experience and good practices.

In 2018, the project partners participated in the study trip in Bosnia and Herzegovina (Annex 7.2.14). The purpose of the visit was to transfer the experience and knowledge from LIFE Kočevsko project. We believe that networking and knowledge exchange between the two countries is crucial for achieving common goals about nature conservation and that good transferability of the project results is achieved. The results from LIFE Kočevsko project and the measures for the target species were presented to national park administration, managers and rangers. During our field trip, we also learned about the management of the protected areas of the Dinaric Arc, its coexistence with tourist and recreational activities, as well as a field visit to forest reserves.

A participation at two international conferences was foreseen in the Grant Agreement. In 2017, we attended the International conference in Poland with the title “*Biology, ecology and protection of Galliformes in Poland and Europe*” (<http://konferencja.lifeurogallus.pl/en>).

We actively participated in the *Water Days 2017 Symposium* with an oral presentation entitled *Nature Conservation Significance of the Biodiversity in the Karst Underground with Caves and Abysses, Proteus and Other Cave Fauna*. (Annex Second Progress Report 7.1.56).

We actively participated at the *3rd International Conference SOS Proteus: Conservation of Proteus and Its Habitat – 250 Years after Its Scientific Description* (Annex Second progress report 7.1.8). At the conference, we had an oral presentation about the threshold concentration of nitrate for groundwater as a habitat of the proteus (results from the research in C1 action).

Between 16 and 20 March 2019, we attended the 8th International Woodpecker Conference entitled *Conservation & Ecology of Woodpeckers* in Białowieża, Poland (<https://www.woodpeckers2019.com/>).

Participation at the international woodpecker conference was proposed in project proposal. Unfortunately, no such conference was organized during the LIFE Kočevsko project’s duration, as the last such conference was held between 23 and 26 February 2014 (7th International Woodpecker Conference entitled *Woodpeckers in a Changing World* held in Vitoria-Gasteiz, Spain). In November 2017, we were informed by Gilberto Pasinelli (Annex 7.3.3.9) that 8th International Woodpecker Conference entitled *Conservation & Ecology of Woodpeckers* would be held between 16 and 20 March 2019 in Białowieża, Poland (<https://www.woodpeckers2019.com/>). At our joint monitoring visit in September 2018, we were advised and encouraged by our technical desk officer to include such activities as after LIFE activities and include them in our project budget. Attending a woodpecker conference is a great opportunity to promote the results of the project and to gain new knowledge regarding woodpecker management. The conference registration fee and travel expenses had been paid before the end of the project and included in the final financial report.

## 5.2 Dissemination actions

### 5.2.1 Objectives

Dissemination activities successfully raised the awareness of the project's activities, objectives and results among national and local target groups, general public, local authorities, main stakeholders, students and teachers. Dissemination activities also spread the awareness of the Natura 2000 network and LIFE Environmental Programmes.

Printed posters and leaflets were distributed during external public events, fairs, presentations, and round tables. During the events, we also used other communication tools that had been created during the project such as an interactive digital model and a 3 min promotional movie. The information boards with the LIFE logo and a project name had been placed at partners' headquarters at the beginning of the project. The project's website ([www.life-kocevsko.eu](http://www.life-kocevsko.eu)) was regularly uploaded with all deliverables, reports, and information about the project.

During the duration of the project there were over 85.183 recorded visits on the website. In addition to this, 30 articles were published in regional newspapers and 12 articles appeared in national newspapers. The project was covered twice on a national radio and appeared ten times on a national television and four times on a local television. Besides that, 16 articles were published on various newspapers' websites. There were 14 articles published in professional literature and there were four international publications of the project.

Project was presented at Nature – Health fair three times. There were three photo exhibitions of the target species and wooden models. A photo exhibition of the target species was installed at the Ministry of the Environment and Spatial Planning premises, inside a public library, and in primary and high schools.

The project also carried out the education and training for different sectors (forestry, hunting, agriculture, tourism) and the education of forest pedagogy. They increased the awareness and importance of preserving nature, the target species, their habitat types, forest ecosystem, and groundwater in Natura 2000 Kočevsko area.

## 5.2.2 Dissemination: overview per activity

### Action E.1

#### LIFE notice boards on the premises of the beneficiaries

Name of the Deliverable	Original deadline	Actual implementation	Implementation status
8 notice boards	30/11/2014	30/11/2014	Completed

Eight notice boards were set at the premises of the project partners' organizations including headquarters and field offices (Annex Inception Report 7.2.5).

### Action E.2

#### Corporate design for the project and web site

Name of the Deliverable	Original deadline	Actual implementation	Implementation status
Stakeholders informed and included in the project actions decision-making	31/01/2019	31/01/2019	Completed
Published results of the project actions	28/02/2019	28/02/2019	Completed

A corporate design and logotype (Annex Inception Report 7.6.5.) for the project was prepared by the project partner ZRSVN in December 2014.

In the project application, a website including a platform for stakeholders' involvement and participation was proposed. Because the project was very forestry oriented and thus specific, we realised that all key stakeholders were already co-operating with the project partners through other communication tools (individual meetings, workshops, round tables, public consultations, etc). Because of that, we decided that a web platform for stakeholders involvement is not needed. Instead, a general project's website was launched.

All project partners cooperated in designing the website by providing the relevant content. The website contains all completed project deliverables, reports and it was constantly updated with information and news and will remain active for at least five more years after the project ends.

By the end of February 2019, there were 85.183 individual visits by 32.009 individual users (Annex 7.2.15). 302 project news were published in Slovene and 271 in English.

Mostly webpage visitors (63,50 %) were from Slovenia.

A Facebook page was launched in August 2015, sharing project news and promoting the Kočevsko region nature conservation. Until the end of February 2019, 217 posts were shared by the page and the page had 678 followers (Annex 7.2.16).

### **Action E.3**

#### **Networking with stakeholders: education, training and awareness raising**

<b>Name of Deliverable</b>	<b>Original deadline</b>	<b>Actual implementation</b>	<b>Implementation status</b>
12 presentations for elementary and secondary schools; 4 presentations for adults	30/11/2018	30/10/2018	Completed
1 training for foresters; 1 training for hunters; 2 trainings for spatial planners, tourist workers, land owners and potential polluters of the caves	31/08/2018	31/10/2018	Completed
3 education courses for teachers	31/08/2018	30/09/2018	Completed

Action E.3 contained specialized professional and general education about the importance of forest and underground biodiversity. Two types of activities were implemented: (1) education and trainings of foresters, hunters, municipality workers, tourist workers, local farmers, etc; and (2) education about forest pedagogics for teachers, tourist guides and regional development workers, who would further transfer their knowledge (to elementary and secondary school pupils) and adults.

We organized and coordinated 36 educational events and trainings for foresters and hunters, which were attended by 906 participants. These events included specialized trainings about target species, their ecological demands, monitoring protocols, conservation measures, etc. Trainings included cabinet work as well as fieldwork at several project sites. The main focus of these trainings was to transfer knowledge, experience and best practices acquired during the project.

The project's activities, gained knowledge and experience and especially the established system of the implemented conservative measures in the area of Natura 200 were presented to 21 forest professionals from Georgia, who are in the process of establishing the system of forest management based on experience and guidelines accumulated during the presentation in the Republic of Slovenia. (Annex 7.3.3.10)

We prepared a manual (Annex 7.2.17) for regional foresters and hunters about how to implement specific measures for the target species in their forest districts. It is very important to continue the efforts undertaken in this project once the project ends. This manual is one of the essential tools for achieving this goal. The manual is a technical document whose primary

purpose is the protection of the project's target species. In the manual, foresters and hunters can find tips and recommendations to maintain or create a favourable habitat for the target species. The manual describes essential elements related to the biology of the target species and their habitat, as well as general guidelines and objectives that serve as the framework for silvicultural policy proposals. The manual was distributed to all foresters in the Kočevsko region, as well as in other forested regions in Slovenia (hard and pdf copy).

In order to sustain the established "regime" and system in the area of Reško lake and at the locations of quiet zones, we organized meetings with target groups that can crucially contribute to this. We held meetings with 44 policemen from the police station Kočevje (Annex 7.3.3.11), with 126 members from the Angling Club Kočevje (Annex 7.3.3.12), and members from the photographic association of Grča and others.

In October 2018, we organized educational the so-called "LIFE Week", where all major project results were presented to general and expert public. "LIFE Week" included three major events:

- "LIFE below us - pollution of groundwater in Kočevsko", where the results of C1 action were presented, followed by expert discussion (7.3.3.13),
- "LIFE on the Eagle Trail – grand opening of the Eagle Trail along Reško Lake", where expert guiding on didactical forest trail and observation towers were organized (Annex 7.3.3.14),
- "LIFE in forests - implementation of measures for Natura 2000 species", where the results of the project actions C2, C3 and C4 were presented, evaluated and discussed (Annex 7.3.3.15).

As part of the E.3.4. action (Education and training for teachers and educators in the forest sectors) three training courses on forest pedagogy were organized, each of them lasting for two days. The first training course took place in 2017 (Annex First Progress Report 7.1.44), the second was in May 2018 (Annex Second Progress report 7.1.43) and the third course was organized in September 2018. (Annex 7.3.3.16).

A total of 70 teachers and educators participated on the three training courses. Training activities were carried out by a team of the association POSEBEN DAN, Zavod za pristna doživetja. They compiled didactic material which can be used on the Eagle trail and has been published on the project's website and is available to the general public.

The E.3.5. action (Raising awareness in schools) started in early 2018. In January 2018 a winter workshop dubbed *Forest Detectives* was organised for the students of the Kočevje elementary school OŠ Zbora odposlancev; in February 2018 two workshops were held: *Getting to Know Endangered Birds in the Kočevsko Region* at the Kočevje People's University, and *Comparing Birds* at the Sodražica elementary school; and in March 2018 a workshop about the proteus was held at the Sodražica elementary school (Annex Second Progress Report 7.1.45). Altogether, the project was presented to 62 students.

The Natural Science Days took place in April and May 2018 in collaboration with the elementary schools Ljubo Šercer, Ob Rinži, Prevole, Livold, Kočevska Reka, Stara Cerkev and Fara. 12 presentations were executed for a total of 262 children (Annex Second Progress Report 7.1.46). In June and October 2018 also The Natural Science Days in collaboration with the elementary schools Zbora odposlancev, and Ob Rinži. There were six more presentations of the project to 169 students (Annex 7.3.3.17). Altogether we recorder 19 presentations of the project to a total of 431 students.

As part of the E.3.6. action (Raising awareness among adults), 16 students from the Biology Students' Club were informed about the project activities in December 2017 (Annex Second Progress Report 7.1.47), followed by the presentation of the project in September 2018 to 18 adults from the Slovenian Third Age University (Annex 7.3.3.18) and in October 2018, the project was presented to 18 adults coming from the local town of Kočevje. (Annex 7.3.3.19).

Action E.4

**Project promotion**

<b>Name of the Deliverable</b>	<b>Original deadline</b>	<b>Actual implementation</b>	<b>Implementation status</b>
1x visit on the fair Nature-Health and 1 visit on the fair AGRA	30/11/2018	31/10/2017	Completed
2 presentations of the results at the annual event of the Hunting Society of Slovenia; 2 presentations of the results at the annual event of the Cave association of Slovenia and one annual event of the BirdLifeSlovenia DOPPS	30/11/2018	31/12/2018	Completed
10 articles in the local press; 10 broadcasts on local or national radio or TV stations; five articles in national newspapers	28/02/2019	28/02/2019	Completed
3 min video spot	28/02/2019	31/11/2016	Completed
2 international articles in EU word media	28/02/2019	28/02/2019	Completed

Altogether, 38 events for general and expert public were organized and attended by 1001 participants. These events included workshops, excursions, project presentations, roundtables and public tribunes, meetings with local residents, landowners, experts and researchers, local tourist association, local mountaineering society, local cave society, local anglers society, local photographic society, biology and forestry students, Birdlife Slovenia, local police departments, military, etc. At these events, the objectives and the main project's achievements were presented.

The promotional movie about the project was completed in November 2016 (Annex Midterm Report 7.3.10). There are multiple versions of the movie - a longer five minute version and a shorter three minute version in both Slovenian and English language.

The exhibition of the selected photographs was on a display at the Gimnazija in srednja šola Kočevje (November 2015), Zbora odposlancev primary school Kočevje (March 2016), Ministry of the Environment and Spatial Planning (May-June 2016), Tourist information Centre Jezero (February 2017) and Public library Kočevje (April-August 2017).

The selected photographs also appeared in project promotional materials. In October 2015, 500 copies of calendars were published for the year 2016, 3000 copies of postcards, 1500 copies of promotional blocks photo, 1000 copies of leaflets and 350 copies of T-shirts. In

addition, selected expert Lesart d.o.o. produced two versions of posters - together approximately 300 copies (Annex Midterm Report 7.3.8).

Promotional material was distributed among different target groups at promotional and at networking events such as fairs, round tables, and conferences. They are also on display at the Eagle room.

Also, 500 badges, 1140 pencils, 250 calendars for year 2018 and 250 pocket planners were produced as additional promotional material. In October 2018, a promotional brochure about *Proteus Anguinus* was published. (Annex 7.2.18).

From June 2018 until the end of February, there were two articles in a local newspaper, three articles in a regional newspaper, one article in an online publication. The project was also featured in two professional literature, it appeared twice on the national TV, it was featured once on the national radio and there were three articles in a national newspaper (Annex 7.3.3.20).

In October 2018 an event was organized called “Opening of the Eagle Trail – LIFE on Eagle Trail”. This event marks the official opening of the educational trail. More than 70 people attended the event (Annex 7.3.3.14).

A complete list of the publication of the project for the period from the beginning of the project until the end of the project has been compiled (Annex 7.3.3.32).

During the project, we managed to establish a good cooperation and relationship with various media outlets on a local and national level. Together with the national Slovenian television, two articles about the white-tailed eagle’s habitat were prepared, about its successful breeding and delivering two offspring (Annex 7.3.3.21). In October 2018, the team of project’s partners came up with a very innovative and well accepted idea of organizing the so called “LIFE WEEK”. During the “LIFE WEEK” the project, its objectives and results were presented on a national radio Val 202 (Annex 7.3.3.22).

There were two presentations of the project’s results at the annual event of the Hunting Society of Slovenia in 2018 (Annex 7.3.3.23), and two presentations at the annual events of the Cave association of Slovenia in 2017 (Caving camp 2017, General Assembly of Caving Society 2017)

DOPPS-Birdlife Slovenia is an important stakeholder in the field of nature conservation with a lot of valuable experience in participating in LIFE projects. As an external contractor, they were actively involved in some activities of the LIFE Kočevsko project. In 2018, a field organization was organized for them (Annex 7.3.3.24).

The Nature and Health Fair is the largest fair on the nature and healthy lifestyle in Slovenia. We attended the fair three times and according to the organizers, over 70.000 visitors attended

these three fairs. On LIFE Kočevsko project fair stand, visitors gained information about the project activities, target species and Natura 2000.

In the project application, at least two international contributions in EU or world media outlets were proposed. In March 2018 we sent an article *Historical Review of Capercaillie Presence and Conservation Measures in the Capercaillie Habitat in Natura 2000 Sites Kočevsko – Implementation of the LIFE Kočevsko Project (LIFE13 NAT/SI/000314)* to editors in Poland (Annex 7.3.3.25). The article would be published in occasion of the Conference *Biology, Ecology, and Protection of Forest Grouse in Poland and in Europe (LIFE11 NAT/PL/428)* as a monograph entitled *Capercaillie In Europe - Biology, Conservation and Management*. In 2019 we got an email from the Editors (Annex 7.3.3.26), that the monograph will be printed by the end of May 2019.

The second international contribution was an oral presentation entitled *Nature Conservation Significance of the Biodiversity in the Karst Underground with Caves and Abysses, Proteus and Other Cave Fauna at Water Days Symposium 2017* (Annex Second Progress Report 7.1.56).

Third international contribution was an oral presentation about the *Threshold concentration for nitrate for groundwater as a habitat of proteus at 3rd international conference SOS Proteus: Conservation of Proteus and Its Habitat – 250 Years after Its Scientific Description* (Annex Second Progress Report 7.1.8).

For both international conferences (capercaillie, woodpeckers) we also prepared two posters summarizing the result of the project (Annex 7.3.3.27).

The project managed to positively change the attitude of the public towards nature conservations, strengthened the presence of partner organizations in local environment and improved their overall reputation.

## Action E.5

### Educational nature trail along the lake and equipment for the "Eagle room" in the cultural centre Kočevska Reka

Name of the Deliverable	Original deadline	Actual implementation	Implementation status
Established info room – Eagle room in the cultural centre of Kočevska Reka	31/08/2018	31/05/2015	Completed
<del>Information board by the Željske jame cave</del>	<del>31/08/2018</del>	<del>31/08/2018</del>	<del>In progress</del>
Educational nature trail with information boards and models	31/08/2018	31/08/2017	Completed

The Eagle room in Kočevska Reka became fully equipped and operational in May 2015. It has been an indispensable meeting point for various working groups. It held educational events for children during natural science days, it has been used for internal meetings, workshops and as a meeting point for various field activities (Annex 7.3.3.28). The models of target species in natural size are also displayed in the Eagle room and will be used for future educational purposes.

In October 2016, the procedures for obtaining licenses for the construction of forest educational trail in Kočevska Reka were completed. The project partners developed a concept of didactic tools and the contents of the information boards which are set up along the educational trail. Before defining the theme and the contents of the boards, two experts working for the Institute for Forest Pedagogics were invited for consultation as well.

The education Eagle trail is 820 m long and 1.3 m wide, with the exception of the section of 70 m located close to the dam, where the path is narrower due to the nature of the terrain.

The educational trail was completed in January 2017 and in August 2017 we successfully conducted the first course of the forest pedagogics on the trail. Participants of the course (educators and teachers from the Kočevsko-Ribnica region) expressed their intention to include a visit of the trail for the school activities. As a result, primary school students visited the education trail within their natural science days activities. The trail has also been used to advise the general public about the project's activities. (Annex 7.3.3.29).

Because of the reconstruction works on the dam, where the Eagle trail begins, the official opening of the trail was delayed and it took place in October 2018. The final reconstruction of the dam also contributed to a safer access to the educational trail.

In May 2018, Mr Slavko Rudolf from the Modus consulting, carried out the examination of the didactic tools and equipment on the trail in order to see if all safety requirements had been met. There were safety objections in regards to the position of the swing, which was set up between the two trees. In order to provide safety environment for all visitors we followed the instructions of the examiner and removed the swing. A new set of construction plans for the swing was presented and also realized. It now meets all the safety requirements (Annex 7.3.3.30).

In order to promote independent visits as well as the trail itself, a brochure about the white-tailed eagle was published providing general information as well as being an educational guiding tool for a visitor.

The information board Željnske cave was originally planned under action E5, but after project partners' consultation, the activity was carried out within action C1.

### **Layman`s report E.6**

<b>Name of the Deliverable</b>	<b>Original deadline</b>	<b>Actual implementation</b>	<b>Implementation status</b>
Layman`s report	28/02/2019	28/02/2019	Completed

The Layman`s report in English language has been prepared. It gives an overview of the project, its main objectives and achievements and it is aimed for general public. (Annex 7.3.1).

### 5.3 Evaluation of Project Implementation

All the actions proposed within the project were successfully completed by the end of the project.

<b>Task</b>	<b>Foreseen in the revised proposal</b>	<b>Achieved</b>	<b>Evaluation</b>
<b>A1</b>	Analysis of the sectoral databases and sectoral plans	Completely achieved	Completely achieved. The action was prolonged for three months because of extensive work with data analysis and because of motivating key stakeholders to participate in sectoral workshops.
	4 SWOT workshops		
	Harmonised conservation baselines for the management of Natura 2000 sites Kočevsko		
<b>A2</b>	Two education courses for 4 target bird species	Completely achieved	Completely achieved. The grant agreement proposed an innovative genetic method for biological inventory. Experts suggested to use semi-quantifying method called “kick sampling” instead. We decided to use this method because it provided better results. Genetic method is still not enough developed that it could provide undisputed results and is also cost ineffective.
	4 technical reports about the baseline status of the target species and habitat type		
	Completed database of the target species and caves pollution		
	Baseline study about the socioeconomic status of the Natura sites Kočevsko		
<b>A3</b>	Conservation measures implementation plan for the white tiled eagle	Completely achieved	Overachievement The information system about the forest management plans was upgraded by including the codes and records of specific conservation measures for Natura 2000 species and they have been applied at the level of the entire state.
	Conservation measures implementation plan for the three toed woodpecker and white backed woodpecker		
	Conservation measures implementation plan for the capercaillie and hazel grouse		
	Conservation measures implementation plan for the rehabilitation and limited access to caves		
	Upgraded information system about the forest management plans		
	Upgraded cave cadastre including data about cave pollution (90 caves)		
<b>B1</b>	The database of eco-cells	Completely achieved	Overachievement The action was delayed due to a very high workload of regional foresters in the summer months (2016) due to bark-beetle outbreak. Instead of 20 ha 28 ha of eco cells were leased.
	The database of the selected habitat trees		
	Leasing contracts for the eco-cells		
	Leasing contracts for habitat trees		

	Inscription of the lease rights in the land cadastre		
<b>C1</b>	6 technical reports about the cleaning of the caves	Completely achieved	Overachievement. Instead of six, seven water caves have been cleaned. Additional raising of the existing road safety fence by one level to prevent dropping waste into the cave.
	6 wooden barriers on the caves entrances		
	14 notice boards by the caves entrances		
<b>C2</b>	Established network of eco-cells with measures	Completely achieved	Completely achieved. The action was delayed because regional managers had increased workload due to the biggest bark beetle outbreak in Slovenia and the second reason for a delay was obtaining permits.
	Established network of eco-cells without measures		
	Thinning of trees with tree griddling on the 200 ha		
	Completed information database of forestry measures		
<b>C3</b>	20 road barriers, 20 traffic signs, 20 traffic boards	Completely achieved	Overachievement Instead of 600 ha of quiet zones, 1794 ha of quiet zones were established - three times more than planned in the application form. Instead of 18, there were 21 hunting objects removed.
	600 ha of quiet zones established		
	30 signposted feeding fences, 20 of them newly set		
	7500 seedlings planted		
	18 hunting objects removed		
<b>C4</b>	2 digital cameras filming nest and winter feeding places	Completely achieved	Overachievement. Additional three notice boards placed on each observation tower, safety examination of the towers.
	500 m of wooden fence for cattle		
	Floating barrier on the water surface		
	Winter feeding ground		
	Three observation towers		
	Re-directed pathways to observation towers		
<b>D1</b>	Technical report about the effects of action C.1	Completely achieved	Completely achieved The monitoring results will only be visible in a period of ten years. A period of four years is not sufficient to get the adequate monitoring results.
	Technical report about the effects of action C.2		

	Technical report about the effects of action C.3		
	Technical report about the effects of action C.4		
<b>D2</b>	At least 30 interviewees with the members of the Forum Kočevsko	Completely achieved	Completely achieved
	Study of the benefits of the Natura site Kočevsko		
<b>F2</b>	Excursion to National Park Bavarian forest	Completely achieved	Overachievement
	Excursion to National Park Risnjak and national park in BIH In Dinarium		There were more presentations than originally planned
	Participation at two international conferences		
	Presentation of the project results at two international conferences		
<b>E1</b>	8 notice boards	Completely achieved	Completely achieved
<b>E2</b>	Stakeholders informed and included in the project actions decision-making	Completely achieved	Completely achieved
	Published results of the project actions		
<b>E3</b>	12 presentations for elementary and secondary schools; 4 presentations for adults	Completely achieved	Overachievement
	1 training for foresters; 1 training for hunters; 2 trainings for spatial planners, tourist workers, land owners and potential polluters of the caves		Instead of 12 presentations, we carried out 19 presentations at schools.
	3 education courses for teachers		
<b>E4</b>	1x visit on the fair Nature-Health and 1 visit on the fair AGRA	Completely achieved	Overachievement
	2 presentations of the results at the annual event of the Hunting Society of Slovenia; 2 presentations of the results at the annual event of the Cave association of Slovenia and one annual event of the BirdLifeSlovenia DOPPS		There were more articles, TV and radio broadcasts than originally planned
	10 articles in the local press; 10 broadcasts on local or national radio or TV stations; five articles in national newspapers		
	3 min video spot		
	2 international articles in EU word media		

<b>E5</b>	Established info room – Eagle room in the cultural centre of Kočevska reka	Completely achieved	Overachievement To attain all necessary permits was the most time consuming part of this action. The access to the trail was hindered for some time because of the construction of the dam. In December 2017, the educational trail was damaged because of the windfall. It was successfully rehabilitated and open to the public again. Safety examination of the educational trail was performed.
	Educational nature trail with information boards and models		
<b>F4</b>	After Life Conservation Plan	Completely achieved	Completely achieved
<b>E6</b>	Layman`s report	Completely achieved	Completely achieved

## 5.4 Analysis of long-term benefits

### 5.4.1 Environmental benefits

With all the planned actions completed and conservation measures implemented, we can acknowledge that the project has significantly contributed to improving the protection of the target species, their habitats and habitat type in the project area. All the specific conservation measures were result-oriented, so their implementation has led to the direct and sustainable improvement of the ecological conditions and conservation status of targeted species and habitats. Since this kind of forest practice had previously not been used in this area, special efforts have been made to educate regional foresters and other forest managers about the techniques and their usefulness for biodiversity and for more effective forest management.

Seven caves have been cleaned and a total of 165 m<sup>3</sup> of waste have been collected and eliminated. This has a direct impact on long-term groundwater quality and proteus habitat, as after the cleaning there is no threat of wastewater pollution any longer. Around the restored caves, wooden barriers (fences) were built to prevent waste being dumped again into the caves and notice signs with the name of the cave and a ban on waste disposal were set up.

Deadwood is a key component in the woodpecker habitat. A total of 29 ha of privately owned forests and 102 ha of state-owned forests have been selected for deadwood accumulation (no tree felling or other removal of trees is allowed for a designated period of time). 300 habitat trees have been leased for 20 years, enriching the feeding and breeding habitat of saproxylic species. A total of 2.771 m<sup>3</sup> of mature trees have been girdled and then left to decay slowly and naturally. A further 200 ha of trees in pole phase were thinned with tree girdling, so a lot of deadwood will emerge in future.

For both grouse species, core zones, which include all suitable lekking areas, have been identified. Core zones were included in forest management plans, which ensures that long-term forest management is in compliance with capercaillies and hazel grouse ecological demands. All core zones were defined as “quiet” zones, meaning no forestry operations are allowed between March and June. The forest road regime has been modified in order to reduce other disturbances. Twenty forest roads that lead into grouse habitats have been closed to traffic by road barriers and appropriate signs. In addition, 40 information and traffic routing boards have been installed to inform and educate users of these areas about the presence and requirements of both grouse species.

Small clearings, gaps and corridors have been established (0.5 to 1 hectare in size) in core zones. More light will now reach the stands and enable growth of berries and other herbs. To prevent browsing of herbaceous and shrub layers, all gaps are protected by fences (deer enclosures). To prevent bird collisions with fences, all fences have been visually marked with small wood boards. 4500 fruiting trees such as rowan and whitebeam have been planted inside the fences to enrich sources of food for grouse. Mulching of forest road edges and overgrowing forest pastures in an area of 11 hectares has been completed, and light conditions have consequently improved and new opened surfaces have been established. This will enable the growth of herbs and berry bushes.

Reducing the abundance of herbivorous game and the density of potential capercaillie predators can have a positive impact on the supply of food for the capercaillie and its survival rate. In agreement with state hunters, 21 selected feeding stations and baiting sites for wildlife have been removed from core zones for capercaillie, since predation of capercaillie ground nests in the vicinity of these sites has been recorded as quite high.

Considerable improvements have been made in the white-tailed eagle habitat. We have set up video and human surveillance of a white-tailed eagle pair and of Reško lake to analyse potential disturbances. A quiet no-disturbance zone around the lake has been established and a physical barrier on water has been built to prevent access to the upper part of the lake (fishing reserve). A 500-meter wooden fence has been installed along the northern part of Reško lake to prevent livestock from accessing the lake. A winter feeding station has been built and stocked with carrion during harsh winter months when the lake is frozen. Three observation towers were built and visitors are redirected to newly rebuilt trails.

We would like to emphasise that certain actions in our project, especially in forests, do not have instant measurable impacts, but significant improvements and the restoration of the conservation status of target species and habitat type are expected in the long run. Evaluation and dissemination of the results will therefore continue well after the end of the project and the actual replication or transfer of project results will be evaluated ex-post.

During Action A2 The Karst Research Institute analysed the current state of the *Proteus Anguinus* habitat and quality of the underground water. In addition to the increased

concentrations of sulphates, a strong anthropogenic effect was observed at all sampling points, especially the increased values of pollutants such as nitrates and chlorides, as well as o-phosphates. Particularly problematic were the estimated levels of nitrate, which were often detected in quantities between 10 and 20 mg NO<sub>3</sub>/l. Nitrates have a very damaging effect on larval stages of amphibians, especially neotenic forms such as *Proteus Anguinus*, which are permanently in the aquatic environment. According to some data, toxic values for amphibians are about 10 mg/l. The Nitrate Directive also highlights nitrate problems.

*Proteus Anguinus* is one of the most remarkable representatives of stygofauna in Slovenia and probably in Europe. Emissions from agriculture and wastewater effluents can pose a threat to existing populations of this neotenic amphibian, but the effects of nitrate on *Proteus Anguinus* and other cave-dwelling aquatic animals are unexplored. In order to reduce the threat of nitrate to the proteus, an external expert prepared a study entitled *Assessment of the Risk Posed by Nitrates for Groundwater Ecosystems and Proteus Anguinus in the Project Area of LIFE Kočevsko* (Annex Second progress report 7.1.6). In the scope of this research, we identified relevant sources of nitrates in the groundwater. We calculated the threshold nitrate concentration for groundwater as a habitat of the proteus. Based on our results, we proposed possible risk mitigation measures to reduce the impact of nitrate to the groundwater as a habitat of the proteus. The proposed measures were as follows:

- Implementing the threshold value of 9.2 mg NO<sub>3</sub>/L in groundwater as an environmental quality standard for good chemical status for proteus habitats.
- Implementing appropriate measures in subvention policy to enhance the agricultural practice manure use and penalizing the pollution of environmental compartments with manure.
- Introducing strict recording of manure application on the farms in the Karst region.
- Surveillance over the adequacy of dung pits, dung collection sites and possible leaks of slurry to the environment.
- A network of stakeholders, NGOs and public bodies that might have an interest should be established and invited to identify and record all possible sources of nitrates in the groundwater.
- To implement the legal terms that would prevent the release of untreated or insufficiently treated wastewater to sink directly to the Karst underground and groundwater.

The study was subsequently presented to representatives of the Institute of the Republic of Slovenia for Nature Conservation and of the Ministry of the Environment and Spatial Planning and at an expert conference. On the basis of the obtained results, we made a map with the areas where the risk for underground ecosystems and proteus due to nitrates is unacceptably high. In this way, in addition to cleaning the caves during the project, we draw attention to bad agricultural practices and suggested solutions.

The sampling of groundwater quality showed that intensive fertilization in certain areas presented an important problem that caused a higher concentration of chlorides, nitrates and other organic substances in the groundwater. Our findings were reported to the inspection services, police, the Ministry of the Environment and Spatial Planning and other competent bodies. We prepared a practical guidebook (Annex 7.3.3.31) for the protection of waters against agricultural pressures for local police station with a detailed map of the most problematic areas. It was agreed that regular control would be established by the police.

In another case, during our sampling of groundwater quality in one of the water caves, we found substantial pollution from liquid manure. In accordance with the previous agreement between IRSNC, Inspection services and the Police Department, the IRSNC informed the Ljubljana Criminal Investigative Department and the Kočevje Police Department, as well as Agriculture and Environmental Inspection Service about the pollution (Annex Second progress report 7.1.59). Criminal investigation is still ongoing.

Because of our constant warnings about bad agricultural practices in Kočevsko and other Karst areas in Slovenia, the Ministry of the Environment and Spatial Planning organized several expert consultations (outside our LIFE project), which were also attended by LIFE Kočevsko team members. Solutions for reduction of these threats are being implemented through new LIFE project proposals.

We also launched an initiative with the Ministry of the Environment and Spatial Planning to provide funds for cleaning additional caves in the Kočevsko area (Annex Second Progress Report 7.1.4).

With all the concrete actions implemented, project contributed directly to the objectives of Habitats and Bird Directive, The EU Biodiversity Strategy to 2020 and EU Forest Strategy.

The implementation of LIFE Kočevsko project contributed also to the objectives of the Nitrates Directive, aiming to protect water quality across Europe by preventing nitrates from agricultural sources polluting ground and surface waters and by promoting the use of good farming practices. In addition to the policy directly addressed by the project (EU Environmental policy), LIFE Kočevsko also contributed to several other EU policy objectives (Agricultural & Forestry policy, Regional development policy, Climate policy, Social policy, Scientific and technological development objective of EU).

## **5.4.2 Long-term benefits and sustainability**

### Long-term/qualitative environmental benefits

Field surveys of the distribution and habitat conditions of target species, implemented measures and assessments of their impact were key inputs for upgrading management zones

and management system for the target species and the habitat type. The upgraded management zones and specific measures for the target species were integrated into sectoral plans for forestry and game management, which will ensure their long term implementation, even after the end of the project. Knowledge gained from the project will contribute to the implementation, updating and development of several sectoral policies and legislation, in particular nature conservation, environment, forestry, game management and agriculture.

A lack of systematic monitoring of target species in the past led to insufficient knowledge about the distribution of target species and consequently inappropriate management of specific conservation measures. Overcoming the knowledge gap about distribution and habitat conditions of target species and habitat type is one of the most important results of the project. Data from field surveys enabled us to determine the most important foraging, reproduction and wintering habitats for target species and therefore providing basic information for management decisions, especially indicating possible locations for implementing concrete actions. Census points for field surveys were established after a detailed analysis of forestry data about forest stands and then confirmed on field by the district foresters. Therefore, a grid of census points have been established on field and will be used in further field surveys after the projects ends.

Because the management of Natura 2000 areas in Slovenian forests is managed by forestry sector, a good knowledge about species and habitats between foresters is needed in order to sufficiently manage these areas. A serious gap in knowledge about target species, their ecological demands and potential conservation measures for improvement of habitat quality between foresters was indicated. In order to bridge this gap, a series of specific workshops were organized either by the project staff or by subcontractors specialized in target species. More than 906 participants at 36 events took part in educational workshops, improving their knowledge about target species. Some of them later participated in field surveys and were in a constant contact with the projects staff, providing information and their observations of target species on a regular basis. With more foresters familiar with target species and their ecological demands and distribution range, they could plan and execute appropriate conservation measures for these species, consequently restoring their favourable conservation status in the long term.

In Slovenia, obligatory 10-year forest management plans for forest units (FMU) are prepared by ZGS and adopted by the Ministry for agriculture, forestry and food (MKGP). Out of 236 FMU plans, 147 are at least partially in Natura 2000 areas and need to take conservation measures into consideration. In the process of development of FMU plans, goals and measures from Natura 2000 Management programme for Slovenia (2015-2020) are further elaborated by ZRSVN in nature conservation guidelines and transferred into the sectoral forestry planning. Following a suitable inclusion of measures from nature conservation guidelines and by determining measures in FMU plans, the ZRSVN issues a positive opinion about them. The transferability of the results of the project is thus insured by the integration of concrete measures for forest target species into the forest management and hunting management plans. 14 forest management plans (valid for 10 years) and 4 yearly hunting

plans with concrete project measures were adopted between the duration of the project, ensuring long term effects of the project. ZRSVN will also incorporate measures for Natura 2000 species and habitat types into nature conservation guidelines for fisheries and hunting management plans. To achieve the best implementation of programmed measures, nature conservation guidelines are presented in detail in sectoral workshops.

Forests cover over 71 % of Slovenian Natura 2000 sites. Because more than 75 % of Slovenian forest are privately owned, measures for Natura 2000 species in private forests are very important for reaching biodiversity goals. Following implementation success of LIFE Kočevsko conservation measures, project team members were leading the preparation of set of conservation measures, which will be included in forestry regulations and financed or co-financed in privately owned forests from the state budget. An amendment to *Rules on financing and co-financing investments in forests* (Official Gazette of RS, Nos. 71/04 , 95/04 , 37/05 , 87/05 , 73/08 , 63/10 , 54/14 , 60/15 and 86/16 ) is expected to be adopted shortly to endorse these changes, thus LIFE Kočevsko project had direct impact on forestry policy and funding changes in Slovenia. When amendment to the Rules is adopted, proposed Natura 2000 conservation measures will be implemented and applied throughout the country.

An important factor to consider when implementing conservation measures in private forests is a stable and continuous source of financing for Natura 2000 measures. Conservation measures in private forests will be financed by National Fund for Forests. Management of State Forests Act in 2016 established this fund to support among others also Natura 2000 measures in private forests. The amount of means for Natura 2000 measures is determined annually by the Government in the so-called *Program of spending National Fund for Forests*. In 2016, 240.000 EUR, in 2017 200.000 EUR and in 2018 750.000 EUR were assigned for Natura 2000 measures in privately owned forests. We can estimate that on average around 300.000 to 500.000 EUR will be allocated yearly to this fund for Natura 2000 measures in private forests. LIFE Kočevsko team members are actively involved in preparation of regulations and implementation of this national fund.

Natura 2000 Management programme for Slovenia for the period 2015-2020 (PUN 2000) determined detailed conservation objectives for each species or habitat type at Natura 2000 sites, conservation measures and guidelines to attain these objectives. It also indicates the sector and the entity responsible for the implementation of measures. For the achievement of its objectives, PUN 2000 defines **priority projects** (Appendix 6.4 Planned projects). They are financed from the Operational Programme for the Implementation of the European Cohesion Policy 2014–2020. One of the priority projects is entitled *Kočevsko-land of forests* and is a **follow up** project to LIFE Kočevsko. In new project, which was written and developed by LIFE Kočevsko team members, many of the conservation measures for capercaillie, hazel grouse and white tailed eagle will be upgraded or replicated, thus ensuring their long-term sustainability.

Other financial sources will be mobilized in the way that priority Natura conservation measures will be regularly implemented.

On 8 April 2017, ZGS organized the annual cleaning campaign Očistimo Kočevsko 2017 (Let's Clean the Kočevsko region). Judging by the number of participants (1,700 people), it is safe to say that this has been the largest voluntary campaign in the Republic of Slovenia. Within the campaign, 22 tons of illegally deposited waste were collected and removed. The cleaning initiative was repeated in 2018. On 14 April 2018, some 1,300 people from the Kočevje area removed 16,280 kg of illegally deposited waste.

#### Long-term / qualitative “economic” and “social” benefits

The implementation of the project activities largely affected the residents of the project area Kočevsko. A lot of work was dedicated in communication and personal approach to the local communities, which are due to recent history still largely isolated. Participation of all relevant stakeholders in workshops enabled knowledge exchange and cooperation with common goal of further sustainable socio-economic development in the project area. As a result of this cooperation, a successful implementation of various projects in near future is expected, which will also support regional companies and service providers by inviting them to participate in the projects. We encouraged local residents to seek new business and employment opportunities – forest pedagogy, self-employment in tourist sector and the development of complementary activities (e.g. tourist farmhouses). The project also contributed to the promotion and strengthening of regional identity of the Kočevska region. We also prepared and presented results of evaluation of ecosystem services, which increased awareness of the economic value of preserved nature of the project area.

Project partners are aware that the project area management is an inclusive process. In order for key stakeholders to openly present their views and ideas, be well informed about the project, identify themselves as much as possible with the projects objectives and actively participate in the project area management, we conducted several workshops with the key stakeholders at the initial stage of the project. At the workshops, stakeholders were invited to participate in the subsequent phases of the project. In this way, the cooperation between the institutions, land owners and the key stakeholders in the project area was strengthened and their mutual understanding enhanced. Consequently, establishment of a long-term partnership, which brings added value to the management of Kočevsko area, has been established, therefore stakeholders' involvement is based on participative approach. We strongly believe that only through good cooperation with stakeholders we can achieve efficiency and sustainability of project results.

In addition to communicating with key stakeholders, we strived throughout the project to present project activities to the widest possible public. For this purpose, we organized numerous workshops, expert excursions, educational events and project presentations. At these events, we explained the objectives and later the results of the project, thereby increasing the awareness of the preserved nature and its advantages. We consider that only with a widely accepted consensus, we can effectively operate in the Kočevska region. At

workshops and other events, we actively encouraged local residents to create new business and employment opportunities.

Considering the fact that LIFE Kočevsko is a demonstration project, the project's important focus was on the transfer of project good practices to other stakeholders and other areas. We actively participated at numerous networking events, expert consultations and conferences and good practice field trips in Slovenia, Austria, Croatia, Hungary, Germany and Poland.

With an active appearance in the public, we highlighted and promoted the importance of nature conservation and the basic principles of the Natura 2000 sites. Namely, the project area is almost fully integrated into the Natura 2000 Kočevsko region, but for various reasons, Natura 2000 is not recognized as an asset in regional development by local communities, but rather as a limitation. With a number of communication activities, we tried to reject this paradigm. Kočevska, with its extensive forests and biodiversity, represents an extremely unexploited opportunity. Through the establishment of information and educational infrastructure, the project actively promoted the possibilities that preserved nature can offer to the educational system and tourism.

In our opinion, education is one of the more effective ways of transferring knowledge about the importance of nature conservation to next generations. Natura 2000 can contribute to achieve this goal by enhancing coexistence between man and nature. Specific educational and pedagogic activities were organized on the didactic Eagle trail, targeting schoolchildren, young people, teachers and tourist workers, as well as the wider public. Almost 500 schoolchildren have been reached and are now better informed and educated about issues related to nature conservation. We hope that this increased knowledge and awareness will lead to long-term environmental benefits. In addition, we developed interesting and creative tools for forest-related pedagogics and other information materials. We can say without any doubt that the LIFE Kočevsko project has promoted and contributed to improving educational programs about nature conservation and biodiversity. Proposals for integrating nature conservation topics into school curricula have also been brought forward.

Since education is also one of the most important factors influencing the development of the region, we have carried out a number of specialized professional and general educations about importance of forest and underground biodiversity. With the help of external experts and methods of forest pedagogy, we conducted trainings for teachers of elementary and secondary schools on the importance of forest and cave ecosystems, the preservation of Natura 2000 species and their services. The trained teachers then transferred knowledge through targeted education to children, youth and adults which will contribute in the long run to a better awareness and readiness of inhabitants to maintain biodiversity in Kočevsko.

Preserved nature is a key building block of the tourist development in the region. Preserved ecosystems and a rich natural and cultural heritage can become a key part in the tourist offer in Kočevsko and a key link between the development of the economy and the preservation of nature. We believe that the future of tourism development in Kočevski can certainly be in the

marketing of biodiversity, and consequently also with its preservation. This certainly implies a need for greater investment in tourist infrastructure and a nature interpretation infrastructure that attracts visitors and enables them to experience nature in a genuine and experienced way. The well-positioned infrastructure directs and concentrates visitors to specific areas, thereby increasing the possibility of marketing local products and on the other hand discourages them from visiting sensitive parts of nature, which are intended solely to achieve nature protection goals. Within the LIFE Kočevsko project, we directly financed the construction of tourist infrastructure in Kočevska Reka, with the main purpose of directing visitors outside the key foraging and breeding habitat of the white-tailed eagle. Tourist-recreational activities are therefore submitted to the protection of nature, which excludes intensive and massive forms of tourism. As part of the project, the Eagle room was equipped as an information point, arranged, the Eagle educational trail was built, three new observation towers were built. By transferring the management of tourist infrastructure to the Kočevje Public Institute for Tourism and Culture, the infrastructure will be available to visitors even after the end of the project. The newly organized tourist infrastructure also represents an opportunity for the local community to recognize tourism as an activity that will not only allow the region to flourish, but also to the development of human potentials, trained and motivated to seek new innovative tourism products with the Natura 2000 label. Natura 2000 as a recognizable label increases not only the value of the Kočevsko region, but also the value of the entire country and the wider Dinaric region.

For the first time, a good communication with members from State hunting reserves with the special purpose (LPN) and Slovenian State Forests (SiDG) was established.

#### Continuation of the project actions by the beneficiary or by other stakeholders

Several activities will be continued after the end of the project. ZGS and ZRSVN will integrate conservation measures and management zones into existing sectoral plans for forestry and game management, which will ensure their long term implementation. Census points of target species and their habitat will be included in national monitoring scheme and census will be continued by the members of speleological society, Slovenian hunting association, regular work of forestry and nature conservation public service and volunteers.

We will continue to develop concrete measures for Natura 2000 management, which will be included in forest and game management plans (ZGS) through Nature conservation guidelines (ZRSVN). Municipality of Kočevje will continue to clean polluted caves. Eagle room became the info point in Kočevska Reka and provides basic information about the area and the project. Maintenance of infrastructure built during the project (Eagles trail, observation towers) will be transferred to the Kočevje Public Institute for Tourism and Culture, so the infrastructure will be available to visitors even after the end of the project.

### **5.4.3 Replicability, demonstration, transferability, cooperation**

We are aware of the importance of transfer and replication of the project results, there are some elements of replicability and transferability listed below and some are already mentioned in previous chapter (Long-term benefits and sustainability).

The project managed to upgrade the management of the Natura 2000 sites Kočevsko and promote and disseminate good practice to other Natura 2000 sites with similar issues. The lessons learned from this project enable us to replicate or upgrade project activities in other Natura 2000 sites in Slovenia and broader Dinaric region. The Kočevsko project area borders with Croatia with its Dinaric mountains. Both areas are part of Natura 2000 network with very similar habitat types and species, which is no surprise since similar forests cover these two connected areas. We believe that networking and knowledge exchange between the two countries during and after the project is crucial to successfully achieve the nature conservation goals set by the EU legislation. The cooperation and harmonized conservation measures are crucial for successful implementation of the goals set in the project.

Project served as a good example for other Natura 2000 sites, therefore we expect that other protected site administrations will be interested to visit the project site and learn conservation measures implemented. Locations with implemented measures became polygons for forest managers across Slovenia. The project area will be also an important training ground for education of foresters and hunters on management with natural resources, taking into account the conservation measures for target species and habitat type and thus allowing for the preservation of favourable conservation status of many species and habitat types.

In Slovenia, forests cover 70 % of the Natura 2000 areas. However, advantages offered by Natura 2000 are currently recognised only to a lesser extent and very little resources for the research of specific forest management in Natura 2000 areas have been invested in the past. The same goes for the underground ecosystem. This project certainly encouraged work on these topics in the future, both in the project area, and in other Natura 2000 areas with similar ecological conditions. Thus, a lot of potential for replication and transfer of project results is expected.

Transferability within forest management will also be ensured through the manual for foresters and hunters about how to implement specific measures for target species in their forest districts. The manual was distributed to all foresters in the Kočevsko region (hard copy), as well as in other forested regions in Slovenia (pdf copy). Pdf copy of a document is also published on the project's website and thus accessible to everyone interested. The manual will significantly contribute to the improvements in planning and the implementation of conservation measures, which were tested and evaluated during the project. The manual will eventually enable the transfer of good practices to other forest regions. The collaboration between the experts from forest management sector and nature protection sector enabled transfer of experiences and knowledge that can and will be used in new projects.

Knowledge that was obtained in the project LIFE Kočevsko will also be transferred to the IP project area of Kamniško Savinjske Alpe & Grintavci and Boč in LIFE integrated project for enhanced management of Natura 2000 in Slovenia - LIFE-IP NATURA.SI (LIFE17 IPE/SI/000011).

Project results and good practices were also promoted during our expert field trips to EU and other countries (international conferences, professional meetings, etc.).

One of the important objectives of the project was also an inter-sectoral understanding of the importance of the nature conservation requirements of Natura 2000 species and habitat types. The implementation of the project, where four institutions (project partners) and many different stakeholders were involved in order to conserve species and habitats has a great potential of knowledge exchange, dissemination and transferability of the results of the project. Additionally, education and awareness raising with young people in kindergarten, elementary school, secondary school, and work with local communities in terms of informing them about the importance of preserving habitats was important keystone in gaining new “nature advocates”.

Last but not the least, transferability was implemented already during the project through the concrete activities and also through management, consulting and other activities between project partners. Transferability will continue since all good practices will be transferred to all regional units of ZRSVN and ZGS, municipality workers and PIK employees.

#### **5.4.4 Innovation and demonstration value**

In the project, new conservation measures for target species were implemented, which had not been used in Slovenian forests before. The main goal was to upgrade an existing forest and game management system with new specific measures for the target species and the habitat type. Because this forest practice has previously not been used in this area, special efforts were made to educate regional foresters and other forest managers about the techniques, its usefulness for biodiversity and for more efficient forest management. Specific forest management practice guidebook was elaborated to help forest managers implement proper conservation measures in their districts during and also after the project. We monitored and evaluated new management techniques and methods demonstrated in this project and ensured the transfer and replication of the best results of the project. Demonstration value of the project is described in more detail also in the chapter 5.4.2 (Long-term benefits and sustainability).

#### **5.4.5 Long term indicators of the project success**

The most reliable long term indicator of the project success is the population status of the target species and the quality improvements in their habitats. The continuation of the census of the target species and their habitats is therefore crucial for a long term project success. The census points of the target species and their habitats will be included in the national monitoring scheme (in new LIFE integrated project for enhanced management of Natura 2000 in Slovenia - LIFE-IP NATURA.SI (LIFE17 IPE/SI/000011 a new Nation monitoring scheme will be adopted) and census will be continued by the members of speleological society, Slovenian hunting association, regular work of forestry and nature conservation public service and volunteers. Another long-term indicator is also a number of forest management units in Slovenia, where the conservation measures developed in LIFE Kočevsko will be successfully implemented.

#### **5.5 Answers and explanations to the Commission regarding different technical issues**

In this section, the answers to the questions that the EC had in regards to technical issues are provided. (Annex 7.2.22)

## 6. Comments on the financial report

### 6.1. Summary of Costs Incurred

PROJECT COSTS INCURRED					
Cost category		Budget according to the Grant Agreement*	APPROVED CHANGED BUDGET BY E.C.	Costs incurred within the project duration	%**
1.	Personnel	1.067.687,00 €	1.109.970,00 €	1.124.095,20 €	101%
2.	Travel	97.334,00 €	72.834,00 €	74.504,97 €	102%
3.	External assistance	633.736,00 €	601.721,00 €	608.042,07 €	101%
4.	Durables: total non-depreciated cost	-	-	-	-
	- Infrastructure sub-tot.	-	-	-	-
	- Equipment sub-tot.	242.110,00 €	243.805,00 €	239.680,64 €	98%
	- Prototypes sub-tot.	-	-	-	-
5.	Purchase or lease of land	70.000,00 €	70.000,00 €	70.000,00 €	100%
6.	Consumables	- €	6.220,00 €	6.177,62 €	99%
7.	Other costs	15.220,00 €	21.537,00 €	19.148,39 €	89%
8.	Overheads	143.926,00 €	143.926,00 €	143.926,00 €	100%
	<b>TOTAL</b>	<b>2.270.013,00 €</b>	<b>2.270.013,00 €</b>	<b>2.285.574,90 €</b>	<b>101%</b>

\*) If the Commission has officially approved a budget modification indicate the breakdown of the revised budget. Otherwise this should be the budget in the original grant agreement.

\*\*\*) Calculate the percentages by budget lines: e.g. the % of the budgeted personnel costs that were actually incurred

During the duration of the project, there were requests for budget transfers and also some unforeseen costs that were necessary to carry out planned activities. The costs which were necessary and clearly linked to the activities but not proposed in the original budget are explained (Annex 8.11.6)

The budget transfers were proposed between the cost categories. They were requested and explained in detail in the reports, and the last request for budget transfers was requested during the monitoring visit in September 2018. A list of all budget transfers has been compiled (Annex 8.9.3).

The column **APPROVED CHANGED BUDGET BY E.C.** included in the table **PROJECT COSTS INCURRED** is including all the budget transfers from the beginning until the end of the project (Annex 8.9.3) and as such serves as a proposed budget of the project. After the

budget transfers between the cost categories , the total budget cost of the project remained unchanged.

After the budget transfers none of the cost categories increased more than 10% or 30,000€ respectively.

The Personnel cost of 1.109.970,00 € was exceeded by 14.125,20 € (1 %). The main reason for this were additional and unexpected field activities (as explained in Midterm Report p.78).

The Travel cost category of 72.834,00 € was exceeded by 1.670,97 € (2%) resulting in the total cost incurred for the Travel category in 74.504,97 €.

The External cost category of 601.721,00 € was exceeded by 6.321,07 € (1%) making the total cost incurred in the External category 608.042,07 €.

The total cost incurred during the duration of the project in the Equipment cost category was 242.110,00 € and did not exceed the proposed budget which was 243.805,00 €. There is underspending of - 4.124,36 € (-2%).

Underspending of - 2.388,61 € (-11%) is also noted in the Other costs category. The proposed budget was 21.537,00 €. The final cost incurred in this category amounted to 19.148,39 €.

In the budget according to the grant agreement there was no cost proposed for the category Consumables. With the requested budget transfers, the proposed Consumables cost category was 6.220,00. At the end of the project there was underspending of - 42, 38 € (-1%). The spending in the Lease of land category was in line with the proposed budget of 70.000,00 €.

## 6.2. Accounting system

At the beginning of the project, the coordinating beneficiary and the associated beneficiaries established separate cost centres within their accounting systems that were allocated exclusively to the project LIFE Kočevsko for the financial management of the project.

Codes identifying the project were as follows:

CB Municipality Kočevje: **6011026** LIFE13: NAT/SI/000314;

AB ZGS: **A2F** Projekt ohranjanje območij Natura 2000 Kočevsko Life Kočevsko;

AB ZRSVN: **35** LIFE KOČEVSKO;

AB LUK: **4600035** LIFE13 NAT/SI/000314. (until 10.12.2018)

AB PIK: PIK **1000008** LIFE 13NAT/SI/000314 (from 11.12.2018 until the end of the project)

Every three months ABs submitted financial and technical reports to the CB in digital and paper versions. Financial reports included signed timesheets, copies of travel orders with necessary attached documents including meeting minutes, list of participants, photos, and other relevant documentation. Copies of all invoices were labelled with the project number (LIFE SI NAT 000314) and had a reference to the LIFE+ project. The confirmation of payment slips and all relevant documentation regarding selection procedures were attached to the invoices. The financial and technical reports have been reviewed by the CB project assistant and project manager to see if they correspond with the LIFE + rules. In case of discrepancies and errors a respective AB was notified.

At the end of each financial reporting period, joint project expenditure was calculated. A total of 18 financial and technical reports have been delivered.

The timesheet model was made by AB ZRSVN and discussed and approved by LIFE External Monitoring representative Mr. Kaligarič at the beginning of the project. Timesheets were filled manually and duly signed by a responsible person.

### **6.3. Partnership arrangements**

The partnership agreements were signed at the beginning of the project. When the Amendment to Grant Agreement took place, an additional partnership agreement was signed with the Kočevje Business Incubator who acquired a role of a new beneficiary on 11.12. 2018.

Every three months financial and technical reports were delivered. Project partners (ABs) were responsible for managing their budget and recording all eligible costs in financial tables, for correct entering details in timesheets and quarterly financial reporting to the CB.

The financial transactions between CB and ABs were implemented in accordance with the partnership agreements, the contract with the European Commission and the co-financier - Ministry of Environment and Spatial Planning. Listed transactions are evident from the accounts of CB and ABs. Transfers of money between CB Občina Kočevje and ABs ZGS, ZRSVN and LUK were carried out based on formal applications for transactions that were prepared by ABs in accordance with the partnership agreements.

### **6.4. Auditor's report**

An independent external auditor carried out the auditing of the project Life Kočevsko. The first part of audit was performed in September 2016, and the second part at the end of the project (Annex 8.10).

## 6.5 Summary of costs per action

Action no.	Short name of action	1. Personnel	2. Travel and subsistence	3. External assistance	4.a Infrastructure	4.b Equip-ment	4.c Prototype	5. Purchase or lease of land	6. Consumables	7. Other costs	TOTAL
A1	Preparation of the conservational baselines for the management of the Natura 2000 site Kočevsko	31.649,48	874,66	2.880,00	-	11.144,01	-	-	-	-	46.548,15
A2	Field surveys of the distribution and habitat conditions of target species and habitat type and baselines of the socio-economic analysis of the Natura 2000 sites Kočevsko	80.265,48	9.365,26	44.279,82	-	61.602,91	-	-	424,00	-	195.937,47
A3	Preparation of the measure plans for the conservation actions C	40.978,94	739,34	1.500,00	-	-	-	-	-	-	43.218,28
B1	Lease of land	22.394,26	2.548,80	-	-	-	-	70.000,00	-	-	94.943,06
C1	Improvement of the habitat of <i>Proteus Anguinus</i> and habitat type "caves not open to the public"	37.418,53	799,90	77.927,67	-	4.997,75	-	-	134,20	-	121.278,05
C2	Improvement of the habitat and populations of <i>Picoides tridactylus</i> and <i>Dendrocopos leucotos</i>	187.501,83	21.668,63	148.921,99	-	451,10	-	-	217,04	-	358.760,59
C3	Improvement of the habitat and populations of <i>Tetrao urogallus</i> and <i>Bonasa bonasia</i>	122.997,12	8.877,82	170.031,57	-	36.988,16	-	-	1.467,26	15.386,08	355.748,00
C4	Improvement of the habitat and populations of <i>Haliaetus albicilla</i>	70.178,84	4.186,76	35.615,32	-	59.004,37	-	-	-	-	168.985,29
D1	Measurements of the impact of concrete field actions using the monitoring indicators of the target species and habitats	62.899,12	6.355,97	27.116,69	-	5.190,54	-	-	204,73	535,00	102.302,05
D2	Assessment of the socio-economic effects of the project actions and functioning of the target ecosystems	18.026,99	74,21	2.623,00	-	-	-	-	-	-	20.724,20
E1	LIFE notice boards on the premises of the beneficiaries	156,03	-	683,20	-	-	-	-	-	-	839,23
E2	Corporate design for the project and website	46.273,86	49,40	6.535,44	-	-	-	-	-	-	52.858,70
E3	Networking with stakeholders: education, training and awareness raising	47.435,77	1.777,14	16.310,53	-	2.905,54	-	-	2.491,21	-	70.920,20
E4	Project promotion	29.388,93	1.056,12	18.544,35	-	4.881,55	-	-	217,06	-	54.088,01
E5	Educational nature trail along the lake and equipment for the "Eagle room" in the cultural centre Kočevska Reka	60.570,63	1.079,77	25.901,99	-	49.500,73	-	-	149,60	-	137.202,72
E6	Layman's report	-	-	-	-	-	-	-	-	-	-
F1	Project coordination	221.350,77	3.058,40	3.780,00	-	3.013,98	-	-	578,52	1.553,40	233.335,07
F2	Networking with similar projects	44.608,62	11.992,79	13.568,36	-	-	-	-	294,00	1.673,91	72.137,68
F3	Audit	-	-	11.822,14	-	-	-	-	-	-	11.822,14
F4	Life after LIFE plan	-	-	-	-	-	-	-	-	-	-
OH											143.926,00
	<b>TOTAL</b>	<b>1.124.095,20</b>	<b>74.504,97</b>	<b>608.042,07</b>	<b>-</b>	<b>239.680,64</b>	<b>-</b>	<b>70.000,00</b>	<b>6.177,62</b>	<b>19.148,39</b>	<b>2.285.574,90</b>

In the above table, the total cost per action among different categories and project actions is summarized. The main discrepancies between planned and spent funds are illustrated and explained below:

In **Action A1**, the underspending of **13.229,85** was due to the purchase of ArcGIS licence recorded under the Equipment category. As reported in the Inception Report (Annex Inception Report 7.5), the licence was bought in the frame of Action A2 and not A1.

In **Action A2** the overspending of 47.417,47 was due to the Equipment cost. The ArcGIS licence (the total cost of 13.444, 40) which was originally proposed in Action A1 was purchased within A2 Action. In addition to this, two CTD divers (the total cost of 4.399,32) were purchased, which were originally proposed in Action D1. The purchase of the CTD divers has also been reported in the Inception Report (Annex Inception Report 7.5). The rest of overspending occurred mainly due to the increased cost for the Personnel since the elaboration of baseline study about the socio – economic status of the Natura 2000 sites Kočevsko took more time than expected. Besides that, in order to obtain a reliable estimate of the population of woodpeckers, more than 300 points were surveyed which took a considerable work effort.

In **Action B1** the underspending of **35.062,94** was due to the Personnel cost. The proposed Personnel cost was much higher than needed for the execution of Action B1. The reason for this is that it was originally expected there would be a lot more field work with forest owners in order to get their consents regarding the lease of land/trees. Instead of a single habitat tree selection per forest owner, groups of suitable habitat trees were selected for lease, so only 13 contracts with forest owners were needed for 300 habitat trees.

In **Action C1** the overspending of **5.510,05** was mainly due to the increased cost in the External category because an additional water cave was cleaned. This water cave contained far more waste than expected before the cleaning took place and along with this the incurred cost was higher as well. Within the External cost category there has been an additional cost (the total amount of 3.495,30) that was not estimated in the application of the project. This extra cost is related to the study entitled *Assessment of the Risk Posed by Nitrates for Groundwater Ecosystem and Proteus Anguinus in the Project Area of LIFE Kočevsko*. The study was not proposed in the grant agreement but it added an additional value to the project and its objectives.

In **Action C2**, the overspending of **64.872,59** occurred due to the increased cost in the Personnel and External cost categories of the Action C2. Both cost categories were originally not properly proposed. A considerable effort was invested in the identification of locations for the implementation of conservation measures. Apart from this, work load was significantly increased due to the biggest bark beetle outbreak in Slovenia. It was discussed with the EC during the application of the project that on the project level, it is not sufficient to select only eco cells and leave the forest to a natural development for a period of 20 years but a concrete measurement needs to be implemented. In order to execute the measurement, the thinning of

the trees was implemented. To mark the trees in 100 ha of eco cells a lot of work load has been dedicated and this consequently increased the cost of the Personnel.

In **Action C3**, the underspending of **169.161,00** was due to the Personnel and External cost categories. In the application form the funds for Action C2 and Action C3 were not properly planned for the External and Personnel cost categories. The activities in regards to External and Personnel cost categories for the Action C2 required more funds than originally planned while the cost for activities in Action C3 was less than originally planned.

In **Action C4**, the overspending of **28.424,29** was due to the increased cost in the Equipment Personnel, and Travel cost categories than originally proposed. All the three categories were underestimated in the original proposal and in order to accomplish all field activities overspending was recorded in Action C4.

In **Action D1**, the overspending of **18.908,05** was due to the increased Personnel cost. The presence of woodpeckers was not done by an external assistance so the cost for the activity fell under the Personnel Cost. Along with that, 273 locations where the implemented activities took place had to be overviewed, surveyed followed by delivering the reports.

In **Action E2**, the overspending of **9.426,70** was due to a higher Personnel Cost than originally proposed in this action. The project website has been constantly updated with all project partners contributing to a relevant content.

In **Action E4**, the overspending of **16.212,01** was due to the increased cost within the Personnel cost category. There was also an additional cost recorded in the External section that had not been foreseen in the original application but was reported in the MidTerm Report (page 78). The cost was related to a visit of Nature Health fair. Overall, the proposed budget for Personnel cost in this action was highly underestimated since altogether 38 communicational events for general and expert public were organized and attended by 1001 participants demanding more work load than proposed originally.

In **Action F1**, the overspending of **22.597,07** was due to the increased Personnel Cost. The incurred personnel cost related to actions E6, F3, and F4 is recorded under Action F1.

In **Action F2**, the overspending of **20.920,68** was due to the increased cost in the Personnel section since more networking events were organized than proposed in the project's application.

Networking events	Number of events	Number of participants
Expert consultations/conferences	10	772
Networking events	18	831
Good practice (training) field trips	2	74

The actions **A3** (the overspending of **1.958,28**), **D2** (the underspending of **3.017,80**), **E1** (the underspending of **1.695,77**) , **E3** (the overspending of **3.748,20**), **E5** (underspending of **2.226,28**), **F3** (overspending of **39,86**) with some minor deviations within the budget, were in line with the originally proposed budget of the project.

#### 6.6. Answers to the Commission, Requests for budget shifts and other Comments of the beneficiaries

Answers to the Commission are compiled in the document (Annex 8.11).

## 7. Annexes

### 7.1 Administrative annexes

- 7.1.1 F.1 Amendment to the Grant Agreement
- 7.1.2 F.1 Partnership Agreement with the New Project's Beneficiary - PIK
- 7.1.3 F.1 All communication with the EC

### 7.2 Technical annexes

#### List of keywords and abbreviations

- EC European Commission
- AB Associated beneficiary
- CB Coordinating beneficiary
- MOP Ministrstvo za okolje in prostor (Ministry of the Environment and Spatial Planning)
- ZRSVN Zavod Republike Slovenije za varstvo narave (Institute of the Republic of Slovenia for Nature Conservation)
- ZGS Zavod za gozdove Slovenije (Slovenia Forest Service)
- LUK Ljudska univerza Kočevje (People's University of Kočevje)
- SiDG Slovenski državni gozdovi d.o.o. (Slovenian State Forests, LLC)
- LPN Lovišča s posebnim namenom (Special Purpose State Hunting Reserves)

- 7.2.1 C.1 Road Safety Fence Protecting Cave Mullerloch
- 7.2.2 C.1 Road Safety Fence Raised by One Level
- 7.2.3 C.4 Deliverable - 14 Notice Boards at the Entrances to the Caves
- 7.2.4 C.1 Deliverable - Information Board Željnske cave
- 7.2.5 C.3 Deliverable - Improvement of the Habitat and Population of Tetrao urogallus and Bonasa bonasia; 7500 Seedlings Planted
- 7.2.6 C.4 Deliverable - Three Observation Towers
- 7.2.7 C.4 Deliverable - Three Notice Boards in the Vicinity of the Observation Towers
- 7.2.8 C.4 The Notice Boards on the Observation Towers
- 7.2.9 D.1 Deliverable - Final Report on the Monitoring of the Quality of Underground Water
- 7.2.10 D.1 Deliverable - Final Report on the Monitoring of Subterranean Fauna
- 7.2.11 D.1 DOPPS – Report
- 7.2.12 D.2 Deliverable - Assessment of the Socio-Economic Effects of the Project Actions on the Local Economy, Population and Ecosystem Functions
- 7.2.13 D.2 Public Awareness Survey at the End of the Project
- 7.2.14 F.2 Study Trip to Bosnia and Herzegovina

7.2.15	E.2 Web Page Statistics
7.2.16	E.2 Facebook Page Statistics
7.2.17	E.3 Manual for Foresters and Hunters
7.2.18	E.4 <i>Proteus Anguinus</i> Brochure
7.2.19	C.2 Deliverable - Technical Report
7.2.20	C.3 Deliverable - Technical Report
7.2.21	C.4 Deliverable - Technical Report
7.2.22	F.1 Answers and Explanations to the EC Regarding Different Technical Issues

### **7.3 Dissemination Annexes**

7.3.1	E.6 Layman's Report
7.3.2	F.4 After-LIFE Conservation Plan

#### **7.3.3 Other Dissemination Annexes**

7.3.3.1	F.1 Monitoring Visit of Desk Officers
7.3.3.2	D.2 Meeting with project partners
7.3.3.3	E.3 Meeting with project partners
7.3.3.4	D.1 Meeting with project partners
7.3.3.5	D.1 Meeting with project partners
7.3.3.6	E.3 Meeting with project partners
7.3.3.7	E.3 Meeting with project partners
7.3.3.8	E.3 Meeting with project partners
7.3.3.9	F.2 Email Correspondence about the Woodpecker Conference
7.3.3.10	E.3 Presentation of the Project to the Representatives from Georgia
7.3.3.11	E.3 Presentation of the Project to Policemen
7.3.3.12	E.3 Presentation of the Project to the Angling Club Kočevje
7.3.3.13	E.3 "LIFE Below Us" conference
7.3.3.14	E.3 "LIFE on the Eagle Trail" – Official Opening of the Didactic Trail
7.3.3.15	E.3 "LIFE in Forests"
7.3.3.16	E.3 Forest Pedagogics Field Training
7.3.3.17	E.3 Presentation of the Project to Students
7.3.3.18	E.3 Presentation of the Project to Adults from the Third Age University
7.3.3.19	E.3 Presentation of the Project to Adults from the Local Town
7.3.3.20	E.4 Articles, TV and radio broadcasts
7.3.3.21	E.4 Broadcast on the White-tailed Eagle
7.3.3.22	E.4 Presentation of the Project on Radio
7.3.3.23	E.4 Presentation of the Project to the Hunting Society of Slovenia
7.3.3.24	E.4 Presentation of the Project to DOPPS-Birdlife Slovenia
7.3.3.25	E. 4 Article » <i>Historical Review of Capercaillie Presence and Conservation Measures in Capercaillie Habitat in Natura 2000 Sites Kočevsko – Implementation of LIFE Kočevsko Project</i> «

- 7.3.3.26 E.4 Email Communication about the International Article
- 7.3.3.27 E.4 Posters for International Conferences
- 7.3.3.28 E.5 Activities in the Eagle Room
- 7.3.3.29 E.5 Activities on the Educational Trail
- 7.3.3.30 E.5 Reconstruction of the Swing on the Educational Trail
- 7.3.3.31 C.1 Practical Guidebook for the Protection of Waters
- 7.3.3.32 E.4 Complete List of Media Broadcasts

## 7.4 Final table of indicators

## 7.5 Previous Reports to the EC

- 7.5.1 The Inception Report
- 7.5.2 The Midterm Report
- 7.5.3 The First Progress Report
- 7.5.4 The Second Progress Report

## 8. Financial report and annexes

- 8.1 Standard Payment Request and Beneficiary's Certificate
- 8.2 Beneficiary's Certificate for Nature Projects for Durable Goods
- 8.3 Consolidated Cost Statement for the Project
- 8.4 Financial Statement of the Individual Beneficiary CB Municipality
- 8.5 Financial Statement of the Individual Beneficiary AB ZGS
- 8.6 Financial Statement of the Individual Beneficiary AB ZRSVN
- 8.7 Financial Statement of the Individual Beneficiary AB LUK
- 8.8 Financial Statement of the Individual Beneficiary ABPIK
- 8.9 Supporting documents
  - 8.9.1 Costs per Action
  - 8.9.2 Project Costs Incurred
  - 8.9.3 Budget Transfers During the Project
- 8.10 Independent External Auditor Report
- 8.11 Answers on EC Letters Financial Issues
  - 8.11.1 VAT Certificates for AB LUK and PIK
  - 8.11.2 Supporting Documents for Personnel
  - 8.11.3 Explanation of Travel Costs
  - 8.11.4 Explanation on SAZU
  - 8.11.5 Supporting Documentation for Selected Invoices
  - 8.11.6 Additional information on the Cost not Foreseen in the Budget
- 8.12 VAT Certificates of the Individual Beneficiaries

