



LIFE Project Number

LIFE12 NAT/HU/000593

FINAL Report

Covering the project activities from 01/09/2013 to 31/12/2018

Reporting Date
25/03/2019

LIFE+ PROJECT NAME or Acronym
KASZÓ-LIFE

Project Data

Project location	Kaszó, Somogy County, South Transdanubia, Hungary
Project start date:	01/09/2013
Project end date:	31/08/2018 Extension date: 31/12/2018
Total Project duration (in months)	64 months (including Extension of 4 months)
Total budget	€ 1.343.295,00
Total eligible budget	€ 1.325.502,00
EU contribution:	€ 994.126,00
(%) of total costs	74,01 %
(%) of eligible costs	75,00 %

Beneficiary Data

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2. Executive Summary

Project objectives:

The general objectives of the project were the implementation of Community Environmental policy through its integration to silvicultural practice and supporting the further implementation of the Natura 2000 network.

The specific objectives of the project were managing Natura 2000 sites in the West-Inner-Somogy natural micro region (South-West Hungary) and rehabilitate natural habitats that have been degraded.

The project aimed at improving the water supply of the forests, smaller swamps and grasslands of Szentai Forest area (HUDD20063) as well as retaining precipitation in the area and thus stabilising the favourable ecological state. Underground-water level controlled by such methodology positively affected the existing swamps, woodland habitats. The project aimed at supplanting biotic woodland depletes too.

An important objective was to disseminate the long-term results and present best practices applied during the project to the management of other LIFE+ project sites, in order to raise their level of awareness. This project objective was supported by education and training environmental awareness through networking – including public information meetings, media work as well. This objective was concordant to (9) of EC Regulation No. 614/2007 concerning the Financial Instrument of The Environment (LIFE+) that advocates networking, mutual learning and the exchange of best practice for the effective implementation of environmental policy. Additionally, the project aimed to communicate positive message about Natura 2000 sites and the LIFE+ Programme.

As an additional objective of the project the monitoring of the impacts of the actions served as completing the existing and presently monitored data with such observations and information that are relevant to the area and as such provided comprehensive information.

Key deliverables and outputs:

Although concrete technical actions were performed pointwise, the project affected more than 2100 hectar area. The objective of the project was to retain the available water-quantities and to increase the level of underground water by 10-20 cm. In the vicinity of the actual conservation actions, the underground water level was raised by 40-50cm or with even a quantity. The water thresholds were not providing such a great number, but still, reached our expectations: after the conservation actions, in vegetation season, the average increase of the groundwater level was 24 cms. The increase of the groundwater level resulted in favourable ecological impacts: the water supply of swamps and narrow forests along watercourses became more stable, maintaining and conservation of wet habitats were made easier. The suppression of invasives is supported by the better and frequent water supply of habitats and stabilising the natural state.

At the same time, talking about the whole KASZO-LIFE project area, the extreme draughts of the past years caused a severe decrease of the level of the underground water. Wells at the project area showed an average decrease from -63,26 cm to -107,81 cm. At the control parcels (outside of the project area, not affected by our conservation actions), the underground water level decreased from -170,19 cm to 263,51 cm. This shows that our conservation efforts lessen the decrease of the

underground water level by an average of 48,77 cm, compared to the areas where there were no such efforts.

We can still consider this a great result: the extremely rapid decreasing of underground water level was slowed down on the entire project area (2100 ha). The proportion of 91E0 habitat – which entirely benefits directly from the project – is appr. 12 % (~260 ha). Apart from the priority habitat 3160 and 7140 will also benefited from the actions. 91L0 and 91M0 benefited directly too.

The reservoir creation at the Bükk forest meant the creation of a 147 cm deep reservoir (0,86 ha) , which serves as water supply system for the dry season. As the result of the enlargement of Lakes Kűvölgy two additional lakes were developed which means another possibility for water retention on a total surface area of some 7.7 ha.

Besides the creation of new water catching possibilities, the existing watercourses and lakes are maintained and conserved. At Lake Baláta a gutter was built in order to retain water while retention of watercourses at Taranyi-Rinya were solved by building river bed ribs (123 psc). The actions was carried out in the total length of 26.5 km. The mud from one of the already existing 2 lakes of Kűvölgy (~ 10.421 m3) was also dredged. Service roads were reconstructed in a length of 7 km.

In order to best perform monitoring activities, there were 14+4 plots where 100-100 sample trees (*Alnus glutinosa*) were determined. The state of the trees was examined twice a year. Besides the traditional health monitoring methods, the tree ring analysis was also applied.

To achieve the best acceptance, professionals and the general public was involved from the beginning. An educational trail (includes ten stations in its length of 960 m) was set up and guided tours were organised. Traditional communication activities (project website, installing information and notice boards, publication of informative materials, press conferences and public information meetings) served as direct connection to the public. Forestry, nature conservation and water management experts were reached via newsletters, study visits, through networking activities at various events and at our final international conference.

Summarising chapters of the main report:

3. Introduction

This chapter lists the objectives of project, defines the site involved, shortly introduces the targeted habitats, the main conservation targets, socio-economic context of the project and the expected longer term results.

4. Administrative part

The management and administration of the project provided a proper framework and a professional background helping the partners with their administration and management of tasks. Beneficiaries worked according to the principles set in the Partnership Agreement. The funding sources were allocated proportionally to the implementing partners. The partners were well aware of their duties and work towards to achieve their goals.

The subcontracted Project Coordinator had continuous contacts with the beneficiaries, personnel meetings were held to discuss the challenges of financial reporting. The administration of the project went smoothly according to the procedures set in the Partnership Agreement. Beneficiaries had a monthly reporting commitment which was fulfilled by sending a copy of their time sheets,

travel sheets, and tables of other project related costs (external assistance, consumables, etc.). Beneficiaries also sent a copy of their invoices, salary slips and other documentation that justify the reported amounts. The Project Coordinator checked these reports and added the amounts in an excel table, that was recommended by the Commission (LIFE TES). The attitude of Beneficiaries to financial monthly reporting was good.

Participants were also aware of the expertise and fields of competence within the project team. As a team, the Consortium operated well: partners were helping each other with professional assistance, consultation, with the transfer of knowledge on best practice issues. Forestry personnel received a training in order to educate them about environmental protection and nature conservation issues, to raise their level of awareness and prevent harmful activities due to lack of information and understanding.

The Steering Committee held their meetings regularly and facilitated good collaboration between the partners and also with the Commission. In general, the level of communication and flow of information was excellent in the project team.

Contacts and comprehensive communication between the project team and the external monitoring expert provided good transparency for the project and a clear view of the project and its progress. Monitoring visits were implemented with onsite inspections and overviewing the administration. Two amendments to the grant agreement were requested. Project reports were properly submitted, including an extra progress report due to the prolonged end date.

5. Technical part

The activities of the project were implemented as scheduled in the revised / amended project proposal. All the actions were finished by the project end date, conservation actions show good results, dissemination actions were also carried out by the project work plan.

Action A.1 Procurement procedures

Procurement procedures were implemented as per required by the project activities. All services and equipment have been purchased. All milestones were met.

Action A2 Technical planning

All foreseen technical plans, including final construction drawings are ready and supported the permit procedures and the implementation of the construction works of conservation actions.

Action A3 Permit procedures

Water right permits, environmental permission and forest utilisation permits and operating licence (water right implementation permit) of the created lakes (Lake Bükk and extended Lake Kűvölgy system) are available.

Action A4 Stakeholder consultations

20 meetings were organised and held with the identified stakeholder groups. The milestone of the action was met and the deliverable set for the action is accomplished.

Action C1 Reservoir in forest Bükk

Due to the dragging permit procedures the action was in a one-year delay. Works started right after the technical handover of the construction area. The creation of the water reservoir was completed in the 1st quarter of 2016.

Action C2 Conservation of Lake Baláta

Due to the dragging permit procedures the action was in a one-year delay. Building in the by-pass was completed by the end of January 2016.

Action C3 Eliminating Alluvion of Lakes Kűvölgy #1 and #2

The dragging permit procedures caused a one-year delay in dredging mud from the lake. The foreseen activities are completed (dredging, depositing and drying of mud, topsoil stripping of Lake Kűvölgy #2, demolition of old structures and creation new structures, refilling, heightening and wave-protection of the embankment).

Action C4 Enlargement of Lakes Kűvölgy (Lake #3) and Action C5 Enlargement of Lakes Kűvölgy (Lake #4)

Due to the dragging permit procedures the action was in a one-year delay. The foreseen works are completed by the end of January 2016. In *Action C5*, wild alarms were installed and chumps were removed after our second amendment to the grant agreement.

Action C6 Retention of watercourses

Building in the bottom thresholds started in December 2015 and was completed by the end of January 2016.

Action C7 Reconstruction of service roads

Since the action is closely linked to the activities of Action C.3 (using the mud dredged from Lake Kűvölgy #2), the dragging permit procedures caused delays in reconstructing the service roads too. The reconstruction works then were completed on 7km.

Action C8 Suppression of invasive species

Altogether 93 forest parts involving 287,93 ha had been treated. Some forest parts required “multiple” treatment. The elimination of *Robinia pseudoacacia*, *Prunus serotina*, *Acer negundo*, *Ailanthus altissima* and *Solidago gigantea* species was performed by applying mechanical methods (scything, motoric saw). *Prunus Serotina* and *Ailanthus altissima* needed chemical treatment at certain forest parts.

Action D1 Monitoring of the impact of project actions on priority habitats

Monitoring activities are performed as set in the monitoring plan. Monitoring report is ready.

Action D2 Assessment of the socio-economic impact of the project actions on the local economy and population as well as on the ecosystem functions

A survey was carried out, the study was prepared.

Action D3 Detailed habitat mapping

Pedological and hydrological surveys were carried out in the project area in order to develop a site map with special focus on detailed soil type data. Lab analysis of the soil samples, data analysis, site and hydrological modelling took place. The habitat mapping was prepared.

Action E1 Online Communication

The project website (www.kaszo-life.hu and www.kaszo-life.eu) was frequently updated. 6 newsletters were sent the Hungarian and international mailing lists.

Action E2 Installation of gates, informational and notice boards

8 gates were installed at main road crossings and frequently used entryways to the project area. 3 information boards and 17 notice boards were installed at the main entryways to the project area.

Action E4 Media work

3 press conferences were held, aiming to introduce the project and its progress to the media and the public. There are 20 press releases, 4 national newspaper, 8 local press and 49 internet articles delivered. There were 9 specialized articles, 10 TV news and 2 radio news were made. The communication plan was revised taking into account the speed up of the communication simultaneously with the acceleration of the conservation actions.

Action E5 Publishing information materials

Brochures, flyers and maps were prepared, edited and printed in 1000 pcs each. 600 Hungarian and 400 English versions were prepared from each item.

Action E6 Public information meetings

There were 3 information meetings implemented, all in the village of Kaszó.

Action E7 Guided excursion for the public

8 guided tours were organised with altogether 258 participants. 600 T-shirt were prepared and distributed among the attendants of these tours and other project related events.

Action E8 Publishing layman's report

The report was prepared, edited and published in 250 Hungarian and 250 English versions.

Action E9 Post project communication plan

The post project communication plan was elaborated in the last quarter of 2018.

Action E10 International conference

On 29-30 May 2018, the Water in Forests was organised within the frame of our LIFE project. Participants arrived from 5 countries: Poland, Slovakia, Croatia, Serbia and Hungary. The 53 participants represented forestry, nature protection and water management professions.

Action F1 Project management and monitoring of project progress (administrative, technical and financial)

The project coordination was subcontracted. Beneficiaries nominated their technical project managers and personnel responsible for the financial administration of the activities. 5 reports (including the Final Report) were submitted to EC. 2 amendments to the grant agreement were prepared and requested. Monitoring visits were hosted.

Action F2 Steering Committee

The SC was set up and had 11 meetings. Important decisions were made on the amendment of grant agreement and project prolongation.

Action F3 Training, workshops and meetings for the project beneficiaries' staff

Two training events were organised for the personnel of KASZÓ involved in the project, 24 + 38 forestry personnel received training. Their knowledge was refreshed and extended by the custom-tailored presentations made by the experts of NAIK-ERTI. Educational materials were provided to the participants.

Action F4 Networking with other LIFE and/or non-LIFE projects

Beneficiaries established contacts with several similar initiations either by direct contacts or by participating in events organised by other relevant organisations. 5 international visits were accomplished with the participation of 14 colleagues of the beneficiaries. Our project was widely disseminated by our visits on 24 national events. Colleagues established good contacts with professionals. Lessons learned from our project was shared. Project KASZÓ-LIFE was presented at all events.

Action F5 External audit

External auditor was contracted, audit report was prepared.

Action F6 After-LIFE Conservation Plan

After-LIFE Conservation Plan was prepared by our colleagues.

Action F7 Potential synergy LIFE-EEOP

Both project aim at suppressing invasive plant species in the operating area of KASZÓ. In order to achieve the set objectives, the EEOP project applied different methods than the LIFE project. The results of the EEOP project contributed to the increase of the naturalness of the forest and the improvement of the health status of the valuable tree stocks, simultaneously with the decrease of reinfection of the areas by invasives species.

The actions remained feasible during the entire project implementation period, the work plan required only smaller adjustments; and the objectives of the project – in general terms – were delivered on time. The overall project progress proves a timely and successful project implementation.

3. Introduction

The objectives of project KASZÓ-LIFE (LIFE12 NAT/HU/000593) are:

- implement Community Environmental policy by its integration to silvicultural practice
- manage Natura 2000 sites the West-Inner-Somogy natural microregion (SW Hungary)
- rehabilitate degraded natural habitats by improving the water supply of the forests, smaller swamps and grasslands, and by retaining precipitation in the area and thus stabilising the favourable ecological state
- ensuring the long-term sustainability of priority-listed Alluvial forest habitats in the Szentai Forest area
- disseminate the long-term results and best practices applied during the project
- prevent harmful activities due to lack of information and understanding
- communicate positive message about Natura 2000 sites and the LIFE+ Programme

The site involved in the project is

- HUDD20063 Szentai Forest area

Targeted habitats

- 91E0* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-padion, Alnion incanae, Salicion albae)
- 3160 Natural dystrophic lakes and ponds
- 7140 Transition mires and quaking bogs
- 91L0 Illyrian oak-hornbeam forests (Erythronio-Carpinion)
- 91M0 Pannonian-Balkan turkey oak –sessile oak forests

Main conservation issues targeted

- Decrease of the ground water level (deriving from the decrease in total annual precipitation, past demolition of the natural water-ratining landforms and the forced drainage in order to avoid floods in case of heavy rain)
- Dispersion of the invasive plant species
- Increase of the *Melolontha melolontha* infection rate

Socio-economic context of the project

The almost immediate socio impact of the project is the improvement of air quality due to the biodiversity intensification what develops ever prolific fauna. During the project implementation there is an immediate increase of employment in the small region while the activities were ongoing. Value of wood stays good, securing a profitable operation of the forestry that will be able to stay a significant employer of the region. Areas of forests designated to social services were enlarged with our project. By the dissemination of the project the char (on short term) and employment (on longer term) expected from the project the population of the neighbourhood will become acquainted with the importance of the protection of forests and that of nature conservation. Familiarizing people with nature conservation in an indirect way as well as by direct training and environmental education will involve children learning about and loving nature.

Expected longer term results

- The groundwater level will increase by 10-20 cm
- The status of 91E0*, 3160, 7140 habitats will improve due to the proper water supply
- Stabilising, strengthening and the frequent crop-maturity of sensitive species, thus the natural composition of species will survive
- Risk factors of threats will be significantly lowered or eliminated
- Invasive species will be cleared off from the priority habitat area

4. Administrative part

4.1 Description of the management system

The beneficiaries established a well-operating project management system ensuring the smooth implementation of the project activities.

For the decision making and monitoring actions, a Steering Committee was established on 2nd September 2013, and consists of 3 representatives of the Coordinating Beneficiary and 2 representatives of the Associated Beneficiary. The SC is defined as a key decision making body of the Consortium. The original composition of the SC has changes in 2015 due to the changes in personnel of both beneficiaries. KASZÓ is represented by Mr Gábor Galamb – director, CEO, Ms Edit Szabó – deputy CEO responsible for the financial management and Mr László Horváth – head of forestry department (instead of Mr Mihály Szász – deputy CEO responsible for technical affairs and project manager who left the organisation on 16th November 2015). NAIK-ERTI is represented by Mr Attila Borovics – director and Ms Hajnalka Verebélyi – acting financial manager (substituting Mrs Krisztina Csatay Szabóné – financial manager during her maternity leave).

The project is coordinated by a subcontracted project coordinator (Mr István Lábodi, Lábodi Consulting Ltd.), whose work is supported by a project assistant of KASZÓ (Ms Kitti Szalai) and the financial manager of KASZÓ (Ms Edit Szabó) being also in charge of the project level financial issues. The tasks and responsibilities are clearly divided between the (subcontracted) Project Coordinator and the Project Manager of the CB. As a general rule, the Project Coordinator has a strategic project management function with contacting, communication, reporting and organising activities – which fall outside the scope of activities of the Beneficiaries. Therefore, all personal meetings within the partnership and all communication with the EC and the External Monitoring Expert are organised, managed and administrated by the Project Coordinator.

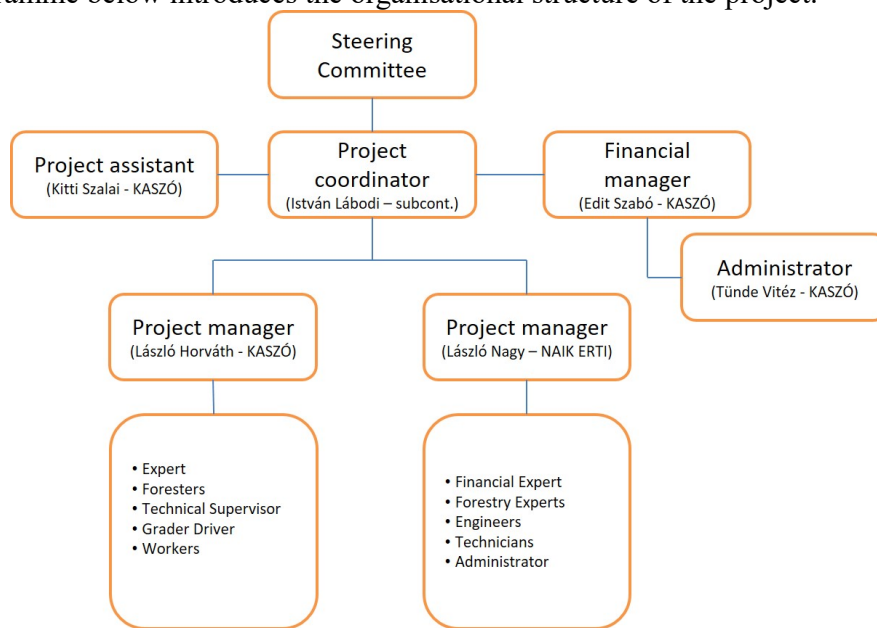
In order to put the inner reporting procedures in place, a project management and reporting guide was prepared (after counselling all partners) which also forms an annex to the Partnership Agreement (signed on 25th November 2013). It defines the technical and financial reporting procedures of the partners.

Both Beneficiaries have nominated their in-charge project managers for the implementation of their technical activities. All other employees of the partners are under their supervision. All communication in between the partners goes through these managers involving also the project coordinator.

Changes in the organisation of the CB do not affect the day-to-day implementation of the project: Mr Mihály Szász left the company and was substituted immediately by Mr László Horváth. Mr Horváth, as the head of the forestry department, was responsible for the implementation of the conservation activities and as such has an update and thorough knowledge of the project progress. The EC and the monitoring expert were informed on the changes in official letters (please refer to the letters of the CB dated 11th November 2015 <sent on 13th November 2015>).

The legal status of the AB (ERTI) also changed: instead of ERTI – Erdészeti Tudományos Intézet - Forest Research Institute, the new name of the beneficiary is NAIK ERTI – National Agricultural Research and Innovation Centre, Forest Research Institute. The amendment to the grant agreement included and manages this issue.

The organigramme below introduces the organisational structure of the project:



For the start of the project, a kick-off meeting was organised with the participation of all responsible managers and employees of the beneficiaries on 2nd September 2013. Here the partners defined and agreed on the exact tasks for the period of the first project year (until the end of 2014) and agreed on the communication procedures as well. At the beginning of each project year kick-off meetings (serving also as SC meetings) are held in the course of which work plans are discussed in order to thoroughly plan and harmonise the activities dedicated for the year. The kick-off meeting of 2015 was implemented on 28th January 2015. The kick-off meeting of 2016 was implemented on 4th February 2016 and the meeting of 2017 on 16th January 2017. Further SC meetings were held in the reporting period (7th November 2016 and 17th March 2017) both discussing the issue of possible prolongation of the project implementation period. The kick-off meeting of 2018 was implemented on 10th January 2018. Another SC meeting was held in this reporting period on 18th June 2018. The first meeting of 2018 was approving the modification request to be submitted by the Partnership. The meeting in June was discussing the additional progress report and the tasks to be completed until the project end date.

Besides the SC meetings, the beneficiaries and their subcontractors had several bi- or trilateral meetings for the coordination of the different actions. Partners perform their project activities as per described in the PA (provided with the IncR). In case any challenges are foreseen beneficiaries immediately inform the Project Coordinator whose task is to contact the respective body in order to find the best solution. In order to minimize travel costs, regular online or telephone conciliations are held in between the consortium members. Beneficiaries had several bilateral meetings with the Project Coordinator where all important issues and crucial points of the project implementation process were discussed including financial reporting issues as well as administration challenges or minor changes. Partners of such discussions, both the Beneficiaries and the Project Coordinator are convinced that all project members are aware of their tasks and responsibilities. The implementation of workplans including the day-to-day (professional) control of the technical activities are elaborated by the respective project manager. They are responsible for all on-site activities with special regard to conservation and monitoring actions. Back-office activities – including dissemination as well – are performed in the partners' headquarters and primarily are checked by the respective project manager. Information, reports, documents and draft materials are shared by the respective project manager with the project coordinator who is in

a day-to-day contact with the CB. Beneficiaries keep contacts by using online tools (i.e. skype, email, dropbox, etc.) and mobile phones besides the traditional forms (meetings, letters, fax).

Since the beginning of the project, an IncR – covering the project activities from 01/09/2013 to 30/04/2014 – has been delivered on 26/06/2014. During the early implementation phase of the project, Partners realised that an amendment to the grant agreement should be requested due to several reasons (please refer to Chapter 3.3 of the IR and Chapter 4.2 of the MTR). The amendment request was submitted on 22nd July 2014 followed by a supplement on 9th September 2014. The request was accepted and the project amendment was confirmed by the letter of EC on 9th January 2015 (please refer to the letter of the EC, Ref.: ENV/E.3 LB/sp ARES (2015) 81897) sent together with the duly signed document (Amendment No. 1 to Grant agreement to project). The MtR – covering the project activities from 01/09/2013 to 11/12/2015 – was received by the EC on 8th January 2016 and commented on 22nd February 2016 (please refer to the letter of EC, Ref: ENV-E-3 LB/PR/ Ares (2016)909641). In between our 3rd and 4th report, on 23rd March 2018 a second amendment to the grant agreement was submitted with a 4 months prolongation request. Dated on 28th April 2017, we submitted a Progress report. The Grant Agreement was amended on 27 June 2018 (Amendment No2 to Grant Agreement for project). With the amendment, the project end date was modified to 31/12/2018. Dated as 30th September 2018, another Progress report was submitted.

4.2 Evaluation of the management system

All management actions are completed: F.1, F.2, F.3, F.5, F.6 and F.7 (please note, that being a networking action, we report F4 among dissemination activities)

The project management system established for the project is good, operates smoothly and has up-to-date information on the project progress and the identified challenges. Issues that require immediate answer are discussed via online means of communication (i.e. skype, emails, telephone). The project management and the performance of the activities are sound, although there were some delays during the elaboration of tasks. The CB has the subcontracts with the external experts for Action F.1 valid and besides the personal meetings, has regular reporting from the assigned expert. The project development is monitored by reviewing the monthly reports of costs occurred at the beneficiaries. The administration of the project is according to the procedures set in the PA. Beneficiaries have a monthly reporting commitment which is fulfilled by sending a copy of their time sheets, travel sheets, and tables of other costs (external assistance, consumables, etc.). Beneficiaries also send a copy of their invoices, salary slips and other documentation that justify the reported amounts. The Project Coordinator checks these reports and adds the amounts in an excel table recommended by the EC. The attitude of Beneficiaries to financial monthly reporting is good. Partners – during meetings – discuss the financial progress and the technical issues. Challenges of compiling the IR and the MTR were also touched during the respective personal meetings.

Project partners have encountered some challenges during the project implementation that required interventions from project management aspects:

- Need to request an amendment to the grant agreement
There were several challenges identified in the initial phase of the project implementation either requiring the amendment to the grant agreement (please refer to Chapter 3.3 of the IR and the text of the

amendment request). The CB could start the public procurement only after the signature of the amendment documents by both parties (EC and CB).

- Dragging permit procedures

As referred in Chapter 5.1.3 of the MTR, in spite of the initial discussions the permit procedures required much more time than foreseen by the discussions. In order not to cause further delays in the commencement of the relevant conservation actions (Actions C.1-C.7) the CB and the Project Coordinator – based on the discussions with the relevant national park directorate (Duna-Dráva NPD) – initiated the division of the conservation actions into two categories based on the availability of the necessary permits. The procurement procedures were implemented successfully and the conservation actions (other than the elimination of invasive plants) could start.

- Prolongation of project end

In order to properly complete the necessary monitoring tasks (Action D1 - Monitoring of the impact of project actions on priority habitats) and to include an additional action (Action D3 – Detailed habitat mapping) that would support the high efficiency of our support the long term conservation of Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* in the Kaszó area, thus giving a high added value to our work done, we requested a 4 month prolongation and technical modification of the project.

The Consortium has regular contacts and information sharing with the External Monitoring Expert (Ms Zsuzsanna Kocsis-Kupper dr.), which we found very useful. The Project Coordinator discusses all challenges of the project implementation with the expert of the Team. Useful advice is frequently shared supporting the activities of the Beneficiaries.

Monitoring mission to the project area:

1. the first mission of the External Monitoring Team (Ms Zsuzsanna Kocsis-Kupper) was held on 11th April 2014. During the mission the locations of the several actions were visited introducing the progress in the actions. Financial issues and requirements of the Inception Report were touched in the course of the office discussion on the administration. The External Monitoring Expert was informed on the foreseen request for the amendment to the grant agreement.
2. on 7th November 2016, including checks of the project administration. During the mission the locations of the conservation actions were visited introducing the completed construction works. The mission was followed by a letter from the EC (please refer to the letter of EC, Ref: ENV-D-4 LB/PR/sp Ares (2017)310199).
3. on 17-18 May 2017 with external monitor Mrs. Zsuzsanna Kocsis-Kupper, technical desk officer Mr. László Bécsy and financial desk officer Ms. Paivi Rauma;
4. on 18 June 2018 with external monitor Mrs. Zsuzsanna Kocsis-Kupper. During the mission the locations of monitoring and conservation actions were visited. In the recent visit, we also introduced the ones that were amended in our modification request. The missions were followed by letters from the EC (Ref. Ares(2017)4141938 - 23/08/2017 and Ref. Ares(2018)4602641 - 07/09/2018).

Action F1 Project management and monitoring of project progress (administrative, technical and financial)

The activities of the action are *completed*.

The action started with the project kick-off meeting was held on 2nd September 2013 with the participation of both beneficiaries. The main focus of the meeting was the discussion on the conservation and monitoring activities, but also the procurement issues were touched.

After finishing the procurement procedure of the project management services (please refer to section 5.1.1 of the Inception Report), Lábodi Consulting Ltd. provides the services as per set in the contract. They have prepared the project management and reporting guideline (annexed to the

PA, please refer to section 4.1 and 4.3) and provide continuous support to both beneficiaries (i.e. trainings on administration and reporting).

The Consortium was represented at the Eastern European Kick-off Meeting held in Warsaw on 5th November 2013 by outside experts who have made a presentation on the project and discussed issues of the project with the representatives of the EC in order to get the answers for properly handling the challenges of the project implementation.

The administration of the project went smoothly according to the procedures set in the Partnership Agreement. Beneficiaries had a monthly reporting commitment which was fulfilled by sending a copy of their time sheets, travel sheets, and tables of other project related costs (external assistance, consumables, etc.). Beneficiaries also sent a copy of their invoices, salary slips and other documentation that justify the reported amounts. The Project Coordinator checked these reports and added the amounts in an excel table, that was recommended by the Commission (LIFE TES). The attitude of Beneficiaries to financial monthly reporting was good.

The Project Coordinator had continuous contacts with the beneficiaries, personnel meetings were held to discuss the challenges of financial reporting. Beneficiaries provided their reports on the technical and financial progress every month.

Important documents in common use (e.g.: LIFE and Natura2000 logos, logos of partners as well as that of the project) were shared between the partners. For the transfer of larger files we either use a free of charge online programmes (toldacuccot, mammutmail, wetransfer, etc.).

Reports, amendments and monitoring visits:

1. On 26th June 2014 an inception report was submitted and together with our first report (dated on 27th June 2014) an amendment to the grant agreement was initiated by the Consortium. The amendment request was compiled by the project coordinator based on the discussions and documents made by the beneficiaries and the subcontracted technical planning company.
2. On 15th December 2015 our Mid-term report was submitted. The second pre-financing was received and transferred to the associated beneficiary. The project visit of the External Monitoring Team was successful (on 7th November 2016).
3. 28th April 2017: Progress report. In between our 3rd and 4th report, on 23rd March 2018 a second amendment was submitted with a 4 months prolongation request. Negotiations about the request were started in-between the Partners in Autumn 2017 and the request was submitted in the beginning of 2018. The Grant Agreement was amended on 27 June 2018 (Amendment No2 to Grant Agreement for project). With the amendment, the project end date was modified to 31/12/2018.

There were two successful monitoring missions to the project area in the reporting period including checks of the project administration:

- on 17-18 May 2017 with external monitor Mrs. Zsuzsanna Kocsis-Kupper, technical desk officer Mr. László Bécsy and financial desk officer Ms. Paivi Rauma;
- and on 18 June 2018 with external monitor Mrs. Zsuzsanna Kocsis-Kupper.



During the mission the locations of monitoring and conservation actions were visited. In the recent visit, we also introduced the ones that were amended in our modification request. The missions were followed by letters from the EC (Ref. Ares(2017)4141938 - 23/08/2017 and Ref. Ares(2018)4602641 - 07/09/2018).

4. 30th September 2018: Progress report
5. And you are reading our Final report now.

The deliverable and milestones set for the action are accomplished: (i) the contract with the project management company was signed on 24.10.2013 well before the deadline set in the

project proposal (15.11.2013), (ii) the public procurement procedure for project management company started on 16.09.2013 (the milestone was set as 01.10.2013).

Action F1	2013		2014				2015				2016				2017				2018			
	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																					
	actual																					

 planned in the modified proposal
 done

Action F2 Steering Committee

The activities of the action are *completed*.

The action started with the creation of the Steering Committee on 2nd September 2013, in the framework of the project kick-off meeting. The Consortium was acting as per set in the PA. The SC had its regular meetings but issues that require immediate answer were discussed via other means of communication (i.e. telephone, emails). SC had 11 meetings:

- 2nd September 2013: the first meeting served for the establishment of the SC, delegation of the members;
- 11th April 2014: the second meeting was dedicated to make the necessary decisions to propose the amendment to the grant agreement.
- 28th January 2015: The Steering Committee of KASZÓ-LIFE has been informed on the tasks fulfilled and activities implemented in 2014 and on the activities planned to be performed in 2015. The Steering Committee of KASZÓ-LIFE agreed on the necessity of accelerating the conservation activities and authorises the project manager of KASZÓ to acquire the necessary permits as soon as possible.
- 6th July 2015: The Steering Committee of KASZÓ-LIFE has been informed on the options of compulsory reporting due in 2015. The Steering Committee of KASZÓ-LIFE authorises the project coordinator to organise and manage the preparation and submission of the proper report (Progress Report or Mid-Term Report).
- 4th February 2016: Parallel to the yearly kick-off meeting, the main focus of the SC was set on the evaluation of the completed activities of 2015 and the planned task for 2016.
- On 7th November 2016, together with the monitoring visit, the second SC meeting of 2016 was held. Topics: the next monitoring visit, the prolongation of the project implementation period and the submission of the PR.
- On 16th January 2017, parallel to the yearly kick-off meeting another SC was held: focused on the tasks completed in 2016 and planned for 2017, especially the communication actions and the potential date of the international conference.
- The SC also met on 17th March 2017 mainly related to the organisational decisions of the international conference and discussing the possible prolongation of the project implementation period.
- At the yearly kick-off meeting of 2018, held on 10th January 2018, the main focus was set on the request for amendment to the subsidy contract. Besides, evaluation of the completed activities of 2017 and the planned task for 2018 were discussed.
- Together with the monitoring visit the second SC meeting of 2018 was held on 18th June 2018. Partners discussed tasks regarding this extra progress report and activities until the end of the project.
- On 12th November 2018, another SC was organised to evaluate the works done, discuss the final steps, activities (esp. press releases, project visits abroad).

Deliverables, milestones:

Although there were no deliverables scheduled for the first reporting period, having two SC meeting memos can be declared that the accomplishment of the deliverable is proportional. The milestone set for the 1st reporting period is met: the first SC meeting was held during the project kick-off meeting (02.09.2013) well before the deadline (31.12.2013). For the extract of the SC decisions please refer to the Annex to Action F.2.).

Action F2	2013		2014				2015				2016				2017				2018			
	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																					
	actual																					

planned in the modified proposal
done

TECHNICAL ANNEXES\Submitted with current 5_FINAL REPORT\Annex F5\

- Extracts of the SC decisions (Memorandum of 11 Steering Committee meetings - deliverable of the action)

Action F3 Training, workshops and meetings for the project beneficiaries' staff

The activities of the action are *completed*.

The action started on 27th November 2013 by starting the preparation of the presentations and the training materials (please note that the focus of the training was discussed during the visits to KASZÓ in the course of other actions, i.e. action D1).

The training and workshop for the staff of KASZÓ was implemented by the experts of ERTI and experts of NÉBIH EI. Besides the compulsory elements of such trainings custom-tailored solutions to the challenges of KASZÓ were discussed. The action was completed as follows:

1. Training and workshop on 5th December 2013:
 - Anikó HIRKA – Kinga ESZTÓ: National Register of the Forest Damages
 - György CSÓKA: Topicalities and novelties of Ethnology in Hungary
 - András KOLTAY: Impacts on climate changes on the health condition of forests
 - Tamás KOLLÁR: Transformation experiments in Kaszó – results and experiences
 - József KÁMPEL: Modification of production capability to the impacts of “opening holes in forests” (Produkciós képesség változása a léknyitás hatására)
 - László NAGY: Coenological investigations in Pro Silva sample areas in County Vas
2. on 21st March 2014:
 - László NAGY: Nature values, Natura 2000 in the Kaszó forests



The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
F.3	Educational package	31/01/2014	21/03/2014	Done Reported in the IR.
	Training event administration report	31/01/2014	24/03/2014	
	First training event held	31/12/2013	05/12/2013	
	Last training event held	31/01/2014	21/03/2014	

The deliverables set for the action are accomplished, the milestones are met, although both deliverables were completed only in March 2014 after the deadline set in the project proposal (31.01.2014), and the second milestone was met later than planned (the first milestone was met before the deadline). The delay in implementing the second training and workshop had no influence on performing other actions of the project.

The deliverables and documents supporting the completion of the action are annexed.



Action F3		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																						
	actual																						

 planned in the modified proposal
 done

Action F5 External audit

The activities of the action are *completed*. The auditor was selected after a procurement procedure on 9th December 2015, Balanzs-Audit Ltd gave the most favourable offer. Contract was signed on 19th December 2018. Works were started the same day with the analyses of the digitalized procurement documents (offers, contracts, invoices) and the staff costs. In January 2019, the auditor spent several days in Kaszó with the analyses of the paper based documentation. In February 2019, the audits were continued in Kaszó and also, started in Sárvár (at NAIK-ERTI). Though the contracted deadline for accomplishing the works were due to 31st January 2019, the works could not be finished because of the accounting system of NAIK-ERTI. Activities are finalised in March 2019.

Action F5		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																						
	actual																						

 planned in the modified proposal
 done

TECHNICAL ANNEXES\Submitted with current 5_FINAL REPORT\Annex F5\

- Procurement documentation of external auditor
- **Audit report (Audit Report.pdf)**

Action F6 After-LIFE Conservation Plan

The activities of the action *are completed*. The After-LIFE Conservation Plan was prepared in the last quarter of 2018 by Ms Kitti Szalai Mr László Horváth from KASZO and Mr László Nagy on behalf of NAIK-ERTI were contributing to the works.

Action F6		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																						
	actual																						

planned in the modified proposal
done

TECHNICAL ANNEXES\Submitted with current 5 FINAL REPORT\Annex F6\

- KASZÓ-LIFE After LIFE Conservation Plan in English (KASZÓ-LIFE After LIFE Conservation Plan.pdf)
- KASZÓ-LIFE After LIFE Conservation Plan in Hungarian (KASZÓ-LIFE After LIFE természetmegőrzési terv.pdf)

Action F7 Potential synergy LIFE-EEOP

The activities of the action are *completed*. The project of KASZÓ (ID: KEOP-7.3.1.2/09-11-2011-0037) received funds for the preparatory works of the project proposal that was submitted on 08.05.2013 (ID: KEOP-3.1.2/2F/09-11-2013-0026 „Szentai-erdő kiemelt jelentőségű természetmegőrzési terület élőhelyvédelme a KASZÓ Zrt. törzsterületén” – “Habitat development of SCI Szentai-erdő in the core area of KASZÓ Zrt.”. The notification on the award of grants was received on 16th October 2013 and the grant contract was signed on 12th December 2013.

After The public procurement for selecting the subcontractor implementing the project activities the elimination of invasive species from the respective EEOP-areas started on 1st August 2014. Suppressing *Prunus serotina*, *Robinia pseudoacacia* and *Ailanthus altissima* species was performed by applying both mechanical and chemical methodologies.

Activities of forest transformation commenced during the autumn of 2014 by logging *Pinus nigra* stocks followed by the removal of the trunks, rotation (mélyforgatás), soil disinfection and then planting *Quercus* saplings and building fences against game damages.

Unfortunately the autumn works were not successful everywhere in the treated areas: the decrease of the mixture ratio of invasive species to 3% was not reached in all treated plots. Therefore the treatment in the affected areas had to be repeated. The project ended on 15th June 2015, followed by an on-site check by the IB of the EEOP MA on 29th July 2015.

The support of growing indigenous arboreal species by the elimination of the rapidly growing invasive species involved altogether 333,12 ha, while the forest transformation activities were performed in 10,77 ha. The attached map clearly and unambiguously distinguishes the locations of the projects.

The works elements of the EEOP implementation project took place in forest parts that do not overlap, and fall outside the LIFE project area. The aim of both projects is to suppress invasives in the operation area of KASZÓ and prevent resprouting. The EEOP activities contributed to the increase of the naturalness of the forest and the improvement of the health status of the valuable tree stocks, simultaneously with the decrease of reinfection of the areas by invasives species.



The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
F.7	Report on synergies in the inception report	31/05/2014	31/08/2015	Done submitted with Mid-Term Report

There are no deliverables set for the action. The milestone was not met in terms of deadline: the report on synergies in the inception report could not be drafted in time since the activities of the EEOP project have started much later than foreseen.

Action	2013		2014				2015				2016				2017				2018			
	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV

F7	planned																		
	actual																		

 planned in the modified proposal
 done

TECHNICAL ANNEXES\Submitted with current 5 FINAL REPORT\Annex F7\

- Report on the synergies of LIFE and EEOP project - summary in English (Report on the synergies of LIFE and EEOP project - summary in EN.pdf)

5. Technical part

5.1. Technical progress, per task

Preparatory (A), conservation (C) and monitoring (D) actions are reported within this section. All A, C, D actions are completed.

All preparatory actions are completed, the procurement procedures finished, all technical plans and necessary permits were available, consultations with the stakeholders have finished. Conservation actions are performed with a one year delay but within the planned buffer-time. The objectives of the project are delivered. Conservation actions were successfully implemented. Monitoring actions proved the necessity of our efforts.

Action A1 Procurement procedures

The activities of the action are *completed*. The action started on 27th August 2013 (after the notification by the EC) by starting the procedure for assigning the public procurement expert by sending out the requests for bidding. There were three offers received out of which the offer of Magyar Közbeszerzési és Elektronikus Beszerzési Zrt. was successful. The contract with MKEB was signed on 5th September 2013. Due to the dragging permit procedures (please refer to Chapters 4.2 and 5.1.3 of the MTR) the construction works were procured in two phases, which required the modification of the contract signed with MKEB. The modified contract was signed on 27th July 2015 and with these, the procurement procedures requiring public procurement expert was finalised.

In the course of the action the following procurement procedures of services were initiated by the subcontracted procurement expert:

Action	Procurement start date	Winner	Date of contract signature
Action F.1	16 th September 2013	Lábodi Consulting Ltd.	24 th October 2013
Actions A.2 and A.3	18 th September 2013	Dél-Dunántúli Vízügyi Igazgatóság	25 th November 2013
Actions C.3 and C.7	27 th May 2015	Sziget-Melor Mélyépítő és Szolgáltató Kft.	30 th June 2015
Actions C.1, C.2, C.4, C.5 and C.6	7 th September 2015	Sziget-Melor Mélyépítő és Szolgáltató Kft.	14 th October 2015

Procurement of the equipment is also implemented within this action. The procedure started on 15th October 2013 by sending the requests for offers for the GPS for KASZÓ. The procurement of the equipment purchased by NAIK-ERTI started on 21st November 2013 by sending out the requests for offers.

The following equipments were purchased at the initial phase of our project (in 2013):

KASZÓ: GPS TC_GRS1 Topcon GRS1 GNSS equipment and DigiTerra Explorer 7 Professional software license. Since the purchase of a GPS and the necessary software consumed all the budget of KASZÓ allocated for equipment, the laptop and the camera were not procured. The foreseen budget for the laptop was 482 EUR (out of this amount 241 EUR is eligible). Planned expenditure for the purchase of the camera (of lower price) was 297 EUR (out of this 148 EUR is eligible).

NAIK-ERTI: Nikon binocular, Biobase laminar box, Trimble Juno package (GPS+software), Asus laptop X450C, Acer laptop Ultrabook NB Aspire/Asus S400CA CA006H, Acer projector P5307WB, 2 Acer notebooks, 4 Mobile Winchesters, 4 Memory cards, 1 Canon telezoom.

2014 purchases:

Due to the budget reallocation approved by the EC in the signed amendment no. 1 to the grant agreement allowed KASZÓ to buy a small bus to transport the workers and the tools and other materials to the locations of the works (mainly to the invasive elimination sites).

Gates (E.2 action) were also purchased.

Due to the availability of equipment that better meet the “value for money” requirement, NAIK-ERTI initiated some changes before the procurement started (please refer to the letter of ERTI on 20.11.2013 – annexed to the current report <Annex 3>). The reasons of the modifications are: (i) there were more modern equipment available introduced to the market after the submission of the project proposal for almost the same price, and (ii) some of the listed equipments were purchased from other funds. Changes were reported in the IncR and also approved by the EC in the amendment to the grant agreement.

In 2014, NAIK-ERTI purchased 2 Canon Powershot SX280 cameras, 2 San Disk Extreme Plus memory cards and the Meteorological station equipped with sensors, data collectors and software. The delay in purchasing the meteorological station had no effect of performing the activities scheduled in the relevant action (action D1) since the data and information gathered by this equipment will be used during the evaluation of the impacts of the conservation actions. (Please note that data and information for the basic survey are gained by interpolating the long-term observations of the stations installed in the surrounding areas.)

In 2015, NAIK-ERTI purchased a set of GB DDR3 Notebook RAM, USB cord, Genius NetScroll mouse. The purchase of Notebook RAM was not planned but such equipment is required as accessories to the laptops used for the on-site data registration and archiving.

In 2016, there was one finished procurement in the course of which the statistical software (planned in the proposal) was completed on 27th June 2016: NAIK-ERTI purchased a Statistica v13.0 Advanced for Win Single user license.

In 2017, there were some minor procurement activities, that were not requiring the involvement of external procurement experts:

KASZÓ purchased a plastic boat in order to assist in clearing and maintaining the water reservoirs. Three companies were invited to give their offers. Sybill Bt. gave the lowest price and KASZÓ purchased the boat on 28th July 2017 for 236000 HUF.

NAIK-ERTI purchased Tree ring density measurement set (Regent DE-R STD Tree ring density measurement equipment, software bundle (évgűrűmérő rendszer, increment borers (Haglöf Mora növedékfűrő) 300mm, increment borers (Haglöf Mora növedékfűrő) 400mm, increment borers (Haglöf mora növedékfűrő) 600mm). The tree ring density measurement

activities and related data evaluations are scheduled for 2017, so the equipment was acquired in time.

In the end of 2018, the ground water level sensors and accessories (data collectors, interface cables) were purchased by NAIK-ERTI (14 pcs Ground water level sensors, data collectors, interface cables. Equipment was installed too.

All purchased equipment bear the Natura 2000 and LIFE+ logos.

The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
A.1	1 procurement expert selected and contracted	15/09/2013	05/09/2013	Done
	Contract signed for Technical planning (action A.2)	15/11/2013	25/11/2013	Done
	Contract signed for action F.1	15/11/2013	24/10/2013	Done
	Contract signed for Construction works	15/09/2014	30/06/2015 14/10/2015	Done The construction works were contracted in two phases due to the dragging permit procedures
	Procurement procedures finished	15/11/2014	30/10/2015	Done The last planned procurement was completed on 14/10/2015

There were no deliverables planned in this action. Milestones were met: (i) the procurement expert was selected and subcontracted, (ii) the contact was signed for action F1 before the set deadline, the (iii) contract for Technical planning (action A.2) was signed some days after the set deadline, but (iv) the signature of the contract for construction works had to be delayed, therefore (v) the procurement procedures have finished later than it was originally planned.

The procurement of the subcontractor for the construction works in the conservation actions (Actions C.1-C.7) was described and reported in the MtR (please refer to chapters 5.1.1, 5.1.3, 5.1.5-11. of the MtR). In their letter following the MtR, the EC requested to describe and justify the use of restricted tender procedure regarding construction works of C actions. Please find below our as requested:

KASZÓ planned to implement the construction works of the C Actions in a single phase. But the permit procedures required much more time than foreseen and expected, even threatening the timely implementation of the conservation actions. KASZÓ – as the CB – initiated discussions with the experts of DDPND and the procurement expert in order to avoid further delays resulting from the dragging permit procedures. The decision was to procure construction works in two phases. The phases were distinguished by the availability of the permits and technical considerations.

Phase I covered the procurement of the construction works of Actions C.3 and C.7, while Phase II related to Actions C.1, C.2, C.4, C.5 and C.6.

Based on par 122/A of part three in Law CVIII of 2011 on public procurements being of legal force at the date of the announcement, negotiated procedure without publication (hirdetmény



nélküli eljárás) has been started, in the course of which the tender documents were sent directly to the selected tenderers. (Please note that if the estimated value of public works does not reach HUF 150 million and no negotiation shall be conducted, the contracting party may carry out a contract award procedure. Instead of the publication of the notice launching the procedure, the contracting party shall send an invitation to tender in writing, directly to at least three businesses – which are able to comply with the eligibility criteria for the performance of the contract according to the contracting party – at the same time.)

The procurement for assigning the external expert for Phase I of the construction works (C.3 and C.7 action) started on 27 May 2015 by sending the invitations to tender to the following three companies: (i) Sziget-Melor Mélyépítő és Szolgáltató Kft., (ii) Vektorút Kft, and (iii) Swietelsky Magyarország Kft.

The evaluation committee checked the submitted tenders according the previously set requirements, and requested the completion of the tenderers' offers. The winner was selected by the revised offers. The notification on the results of the procedure was sent on 19th June 2015 to the tenderers. The construction contract for Phase I with the winner (Sziget-Melor Mélyépítő és Szolgáltató Kft.) was signed on 30th June 2015.

The procurement for assigning the external expert for Phase II of the construction works (C.1, C.2, C.4, C.5 and C.6 actions) started on 7th September 2015 by sending the invitations to tender to the following companies: (i) GEOÉPKER Mezőgazdasági Építőipari Szolgáltató és Kereskedelmi Kft, (ii) Swietelsky Magyarország Kft. and (iii) Sziget-Melor Mélyépítő és Szolgáltató Kft.. The evaluation committee checked the submitted tenders by the previously set requirements, and requested the completion of the offers. The winner was selected by the revised offers. The notification on the results of the procedure was sent on 2nd October 2015 to the tenderers. The construction contract Phase II with the winner (Sziget-Melor Mélyépítő és Szolgáltató Kft.) was signed on 14th October 2015. The technical handover of the construction area took place on 26th October 2015.

Action	A1	2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
		planned																					
		actual																					

 planned in the modified proposal
 done

TECHNICAL ANNEXES\Submitted with current 5_FINAL REPORT\Annex A1\

- Photos of the ground water level sensors

Action A2 Technical planning

The activities of the action are *completed* with the 30th July 2014. delivery of the last plan. The implementation of the activities of the action commenced on 4th September 2013 with the detailed discussions of the preliminary technical survey with special regard to the planning process, obtaining the necessary permits and technical surveillance. There were three further meetings and discussions: During the next discussions held between the partners on 7th November 2013, the issues of the environmental impact study were touched. After the signature of the contract with the successful bidder on the technical planning and surveillance activities (please refer to section 5.1.1 of the Inception Report) the Consortium had the third meeting on 9th December 2013 on the technical planning issues of actions C1, C3, C4, C5 and C7 together with the

subcontractor of planning. During the meeting DDVIZIG drafted the most important issues of the planning including the necessity and requirements of the comprehensive EIC. Due to the unfavourable weather conditions (on-the-site visits to complete the EIC could not be implemented) DDVIZIG initiated the prolongation of the deadline for the tasks, the modification of the contract was signed on 10th February 2014. The findings of the planning procedure were discussed on the meeting on 20th February 2014.

DDVIZIG (the subcontracted technical planner) provided the KASZÓ with the documentation to be submitted for obtaining the necessary water right permits (vízjogi létesítési engedélyezési dokumentáció) for the restoration of the Kűvölgy Lakes and the creation of the reservoir in forest Bükk. At performing the technical planning activities, the detailed and thorough geodesic investigation of the subfluvial alluvion revealed that the amount of mud to be eliminated is significantly less (about 12.421 m³) than projected at the proposal phase of the project (50.000 m³). Therefore the plans for Action C.3 had to be revised and the amendment to the grant agreement had to be initiated (please refer to the amendment request documentation). Another meeting was held on 11th June 2014 during which the challenges set by merging the requests for the water right permits of Lake Bükk and Lakes Kűvölgy were discussed. Finally, the final construction drawings were delivered in July 2014. The EIC was completed by 30th April 2014.



There were no deliverables set for the action. The activities were implemented with delays due to (i) the need of preparing a more comprehensive EIC in which plant species were to be surveyed in more details, (ii) the less amount of the alluvion to be dredged the final construction drawings (kiviteli terv) had to be revised, and (iii) the merging of the requests for the operating licenses.

The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
A.2	Technical plans completed	15/06/2014	30/07/2014	Done. As per the 2 nd modification of the contract the deadline of the delivery was modified to 21/07/2014. Please note that although the dates in the plans refer to 30/06/2014, the actual date of delivery was 30/07/2014.

The milestones set for the action were met: technical plans were completed slightly after the deadline set in the amended project proposal.

Action	A2	2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
		planned																					
		actual																					

 planned in the modified proposal
 done

Action A3 Permit procedures

The action is *completed*. The procedure started with the submission of the preliminary technical plans (előzetes terv) to the South-Transdanubian Environmental Protection and Nature Conservation Inspectorate (Dél-dunántúli Környezetvédelmi és Természetvédelmi Felügyelőség) on 3rd March 2014 to obtain the necessary water right permits (vízjogi létesítési engedély). The

preliminary technical plans included the plans for the interventions in the Kűvölgy Lakes system (actions C.3-C.5) and the plans of the creation of the reservoir in forest Bükk (action C.1). The authority requested the completion of the plans by the findings of the detailed geodesic investigation (dredging only from Lake #2). The revised plans were submitted to the authority on 27th May 2014.

The submission of the revised plans was followed by requesting the merge of the two water right permit procedures on 28th May 2014 which was approved by the authorities on 13th June 2014.

KASZÓ was provided with the water right permits for the reconstruction and extension of Lakes Kűvölgy and the reconstruction of Lake Bükk on 21st August 2014. The notification on the permit being non-appellable and legally binding as of 5th September 2014 was received by KASZÓ on 1st December 2014.

As per the required by the Law XXXVII of 2009 on forests, forest protection and silviculture, KASZÓ has requested the contribution of the Ministry of Defence (the representative of the owner of the project area) to submit the forest utilisation permit request. Based on the approval of the Ministry of Defence, KASZÓ has submitted the forest utilisation permit request to the Forestry Directorate of the Sopron County Government Office (Somogy Megyei Kormányhivatal Erdészeti Igazgatóság) on 7th November 2014. Together with this, another request (a forestry plan modification request <erdőterv módosítási kérelem>) was also submitted to the same office concerning the forest parts affected by the creation of Lakes Kűvölgy #3 and #4. Both procedures were suspended until the end of the environmental impact assessment procedure.

The South-Transdanubian Environmental Protection and Nature Conservation Inspectorate (Déldunántúli Környezetvédelmi és Természetvédelmi Felügyelőség) – related to the forest utilisation permit procedure – initiated the implementation of an environmental permit procedure in December 2014. In order to start the procedure KASZÓ submitted the Environmental Impact Study that had been completed by 30th April 2014.

In order to speed up the progress of the project and not to lose more time with the start of the conservation actions, KASZÓ – on 26th January 2015 – requested the official opinion of DDNPD on the possibility of re-scheduling the proposed timing of the conservation actions. The experts of DDNPD had an on-site visit which resulted in allowing the start of certain activities before possessing all permissions (please refer to Chapter 5.1.1 of the MTR regarding the start of the procurement of the construction works and Chapters 5.1.5.-11. on the description of the respective conservation action).

The South-Transdanubian Environmental Protection and Nature Conservation Inspectorate (Déldunántúli Környezetvédelmi és Természetvédelmi Felügyelőség) called for a public hearing (közmeghallgatás) related to the environmental impact assessment on 9th March 2015.

The environmental permission was received by KASZÓ on 14th May 2015 which became non-appellable and legally binding as of 9th June 2015. The decree on the forest utilisation procedure was delivered on 17th August 2015.

Right after the technical handover-takeover procedure of the finished construction works (on 16th February 2016) the water rights implementation permit (operating license <vízjogi üzemeltetési engedély>) request was completed based on the assigned documentation. The water rights implementation permit request was submitted to Baranya County Disaster Management Directorate (Baranya Megyei Katasztrófavédelmi Igazgatóság) on 5th March 2016. In the framework of a completion procedure, the licensing fees were paid and the operation rules were submitted.

The operating licence for Lake Bükk and Lakes Kúvölgy was received on 11th May 2016. Since the notification on the permit becoming non-appellable and legally binding has not been received as set in the decree KASZÓ has submitted an information request to Baranya County Disaster Management Directorate in September 2016. Although the notification arrived by return post, the approved operation rules were not attached. Finally, the full documentation of the water rights implementation permit was delivered on 3rd October 2016 (please refer to Annex to Action A.3).

An amendment to the decree of the water rights implementation permit was received by KASZÓ on 20th December 2016 (please refer to Annex to Action A.3). The changes made by the Authority were of technical character, as the follows:

- The names of the water courses were deleted from Point 2.2 and added to Point 2.1
- Periods of water abstraction (vízkivétel időszak) was added to Point 2.2
- Point 4.16 was deleted and a new Point 4.16 including the rules on payment liabilities, exemption or partial exemption was added.



KASZÓ has fulfilled its obligations set in the forest utilisation permit by reporting the actual forest utilisation to the authority on 20th February 2017 (please refer to Annex to Action A.3).

The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
A.3	Obtaining environmental permission	31/07/2014	14/05/2015	Done. The environmental permission is non-appellable and legally binding from 9 th June 2015.
	Operating licences for Kúvölgy #1 and #2 extended	31/03/2015	05/03/2016	Done. The operating licence for Lake Bükk and Lakes Kúvölgy was received on 11 th May 2016.

There were no deliverables set for the action. The milestones of the action are met.

Action		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
		planned																					
A3	actual																						

 planned in the modified proposal
 done

Action A4 Stakeholder consultations

The activities of the action are *finished by 16th December 2018*. The action started on 19th September 2013 with the implementation of the first stakeholder meeting with the representatives of Duna-Dráva National Park Directorate and The project manager of KASZÓ informed the stakeholders on the actions, activities and elements of the approved project proposal (please note that DDNPI was involved in the project planning phase also, their declaration of support was part of the project proposal). Besides the general introduction of the project the activities of the concrete conservation actions were discussed in detail. The experts of DDNPI agreed to professionally support the project. (The minutes of the meeting is attached as Annex 4 to the Inception Report.)

The 2nd stakeholder meeting was implemented with the participation of 7 local entrepreneurs on 16th October 2013 on the project and its impacts on the local industry and agriculture. (The minutes of the meeting is attached as Annex 4 to the Inception Report.)

The 3rd stakeholder meeting was held with the students of the University of Pannonia on 16th April 2014. Since the students attend tourism development courses, they were informed on the project activities with special regard to the actions with “touristic” elements (educational trail, guided tours) but the conservation actions were also introduced with regards to tourism links. (The minutes of the meeting is attached as Annex 4 to the Inception Report.)

The 4th stakeholder meeting was held for the the students of the Nyugat-magyarországi Egyetem attending nature conservation engineering courses (természetvédelmi mérnök hallgatók). They were informed about the project.

Beneficiaries held altogether 21 stakeholders’ meetings, all of them are properly documented: memos, attendance sheets and photos support the administration of the action.

In their letter following the MtR – the EC encouraged to consult with the targeted stakeholders and if necessary, organise further meetings to reach the scientific community and technical experts as foreseen, partners reconsidered the status of this action and declared to be in progress.

After submitting the MtR two stakeholder consultations were held. Both are properly documented: memos, attendance sheets and photos support the administration of the action.

On 28th January 2016, with 39 participants, the foresters and hunters of the KASZÓ Zrt. were informed about the construction works of the C actions during an on-site visit. (For the Minutes of the meeting please refer to Annex to Action A.4.)

On 19th June 2016 KASZÓ Zrt organised a consultation with ZALAERDŐ Zrt. about the KASZO-LIFE project, highlighting the elimination of the invasive species. The participants visited the site of the construction works and the location of the elimination of the invasive species. (For the Minutes of the meeting please refer to Annex to Action A.4.)

Before closing the project, there were two meetings: one with the local farmers (14th December 2018 and another with the expert of the DDNPI (16th December 2018).

The following table summarises the stakeholder meetings:

	Date	Stakeholder group	Number of participants
1	19/09/2013	Representatives of Duna-Dráva National Park Directorate	5
2	16/10/2013	Local farmers	11
3	16/04/2014	Students (specialised in tourism management)	34
4	29/05/2014	Students (nature conservation engineering)	22
5	10/06/2014	Primary school pupils and their teachers	18+
6	24/06/2014	Kindergarten group and their attendants	5+
7	09/07/2014	Children of the employees of KASZÓ	15
8	14/10/2014	Tourists visiting KASZÓ attractions	8
9	16/10/2014	Professional hunters in Kaszó	11
10	16/10/2014	Secondary school pupils from Kaposvár	33
11	22/11/2014	Tourists visiting KASZÓ attractions	9
12	12/12/2014	Representative of a private forest in Somogyszob	2
13	15/12/2014	Representatives of Duna-Dráva National Park Directorate	7



14	16/12/2014	Folk dance group from Nagyatád	8
15	19/12/2014	Professional hunters (Kaszó and surrounding settlements)	3
16	09/03/2015	South-Transdanubian Environmental Protection and Nature Conservation Inspectorate	5
17	09/10/2015	Tourists visiting KASZÓ attractions	9
18	28/01/2016	Foresters and hunters of KASZÓ Zrt.	39
19	19/06/2016	Representatives of ZALAERDŐ Zrt.	8
20	14/11/2018	Local farmers	10
21	16/11/2018	Representatives of Duna-Dráva National Park Directorate	3

The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
A.4	Memo of 15 occasions / stakeholder consultation	31/12/2014	19/12/2014	Done. Further two meetings were implemented in 2015.
	1st stakeholder consultation held	31/12/2013	19/09/2013	Done.

The deliverable of the action was scheduled for 31.12.2014 (providing memos of 15 stakeholder meetings) and was met. The milestone set for the reporting period is met: the 1st stakeholder meeting was held (19.09.2013) well within the set deadline (12.31.2013).

Action		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
		planned																					
A4	actual																						

 planned in the modified proposal
 done

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- Memos of the stakeholder consultations held in the reporting period: Local farmers on 14/11/2018 and DDNPI (national park) on 20/11/2018

Action C1 Reservoir in forest Bükk

The activities of the action are *completed*. The activities of Action C.1 were implemented in the course of Phase II of the construction works.

The technical handover of the construction area took place on 26th October 2015. The works started in November 2015 with logging from the areas of Lake Bükk identified in the forest utilisation permit. The following activities were implemented in the course of the action:

- Stripping the topsoil, hollowing and lifting out the old water-bar (áteresz), creation of the concrete base of the new water-bar, placing the new water-bar elements on the concrete base.
- Refilling, compressing and heightening the embankment as per set in the technical plans (i.e. by using the dried mud dredged from Lake Kűvölgy #2 as per detailed in Chapter 5.1.7 of the MtR)
- Creation of the wave protection.
- Formworks and reinforcement of the horizontal element of the outlet tower (barátságilip).

The subcontractor completed all works on 31st January 2016. The technical handover-takeover procedure took place on 16th February 2016 (for the Minutes of the technical handover-takeover please refer to Annex to Action C.1). Maintenance is performed by the subcontractor since the takeover as set in the contracts.



The water rights implementation permit (vízjogi üzemeltetési engedély) was obtained on 11th May 2016 (please refer to Annex to Action A.3).

The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
C.1	Water reservoir created	31/12/2014	31/01/2016	Done. Technical handover-takeover procedure took place on 16/02/2016

There were no deliverables set for the action. The milestone is met.

Action		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
		planned																					
C1	actual																						

 planned in the modified proposal
 done

Action C2 Conservation of Lake Baláta

The activities of the action are *completed*. The activities of Action C.2 were implemented in the course of Phase II of the construction works. The technical handover of the construction area took place on 26th October 2015. The construction works started in December 2015 with performing earth-work (földmunka). A by-pass to regulate the water level of the Lake Baláta has been built in. The construction works were completed on 31st January 2016. The technical handover-takeover procedure took place on 16th February 2016 (for the Minutes of the technical handover-takeover please refer to Annex to Action C.1).



Status inspections were continuous after the completion of the works.

The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
C.2	By-pass built	31/12/2014	31/01/2016	Done. Technical handover-takeover procedure took place on 16/02/2016

There were no deliverables set for the action. The milestone is met with a delay. This delay had no effect on any other actions.

Action		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
		planned																					
C2	actual																						

 planned in the modified proposal
 done

Action C3 Eliminating Alluvion of Lakes Kűvölgy #1 and #2

The activities of the action are *completed*. The activities of Action C.3 were implemented in the course of Phase I of the construction works. The official technical handover of the construction area took place on 30th June 2015. The main activities were accomplished until November 2015:

- The official technical handover of the construction area took place on 30th June 2015
- Dredging the mud from Lake Kűvölgy #2 was performed in July and August 2015
- Depositing and drying of the mud started right after dredging
- The use of dried mud is continuous, linked to the implementation paces of Actions C.4-5
- Stripping the topsoil of the embankment of Lake Kűvölgy #2, demolition of the old wave-protection infrastructure and the old spillway, as well as the creation of the concrete base of the new spillway took place in August 2015
- During September and October 2015 the subcontractor placed the ready-made concrete items of the new spillway to the base structure, refilled and heightened the embankment as per set in the technical plans
- The wave protection of the new embankment was created in November 2015

The construction works were completed on 15th December 2015 with the technical handover-take-over procedure (for the Minutes of the technical handover-takeover please refer to Annex to Action C.3).

Performing maintenance works is the responsibility of the subcontractor and is regularly implemented.

Water gauges (vízmérce) were installed to measure the water level of the Lakes.

The status of deliverables, outputs and milestones is illustrated by the following table:



Action	Name	Delivery date		Comment
		Planned	Actual	
C.3	Lake Kűvölgy #1 dredged	31/03/2014	-	The Lake is not allowed to be dredged, the milestone is unaccomplishable.
	Lake Kűvölgy #2 dredged	31/03/2014	15/12/2015	Done.

There were no deliverables set for the action. The milestones are partly met:

As per the detailed geodesic survey Lake Kűvölgy #1 cannot be dredged therefore the relevant milestone shall be declared obsolete.

Lake Kűvölgy #2 was dredged as per set in the technical plans, with a delayed deadline.

Action C3		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																						
	actual																						

 planned in the modified proposal
 done

Action C4 Enlargement of Lakes Kúvölgy (Lake #3)

The activities of the action are *completed*. The activities of Action C.4 were implemented in the course of Phase II of the construction works. The technical handover of the construction area took place on 26th October 2015. As reported in the MtR (please refer to chapter 5.1.8), the works started in November 2015 by cutting off the trees hindering the activities of the action, stripping the topsoil of the embankment, demolishing the old spillway and outlet tower. The concrete base for the new spillway and outlet tower was completed by mid-November and the concrete items were placed to the appropriate location. After refilling and heightening the valley closing barrage (dam) at the end of November (i.e. by using the dried mud dredged from Lake Kúvölgy #2 as per detailed in Chapter 5.1.7 of the MtR), the compression of the dam was accomplished and the wave protection was constructed in December 2015.

The construction works were completed on 31st January 2016. The technical takeover procedure took place on 16th February 2016 (for the Minutes of the technical handover-takeover please refer to Annex to Action C.1).

As set in the contract with the subcontractor, after the completion of the construction works, regular maintenance activities and the accidental technical repairs were performed by the subcontractor. Workers of KASZÓ implemented minor repairs (e.g. shovelling after heavy rainfalls in 2016 or treading <vadtaposás>).



The water rights implementation permit (vízjogi üzemeltetési engedély) was obtained on 11th May 2016 (the permit is attached to the PR as an annex to Action A.3).

The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
C.4	Valley-closing barrage of Kúvölgy #3 built	31/12/2014	30/11/2015	Done. The delay was caused by the dragging permit procedure.

There were no deliverables set for the action. The milestone is met: the valley-closing barrage was built almost one year later than planned, due to the dragging permit procedures. The delay had no effect on any other actions.

Action		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
		planned																					
C4	actual																						

 planned in the modified proposal
 done

Action C5 Enlargement of Lakes Kúvölgy (Lake #4)

The activities of the action are *completed*. The activities of Action C.5 were implemented in the course of Phase II of the construction works. The technical handover of the construction area took place on 26th October 2015. As reported in the MtR (please refer to chapter 5.1.9) the works started in November 2015 by cutting off the trees hindering the activities of the action and stripping the topsoil in the level of the embankment. The concrete base for the new spillway and

outlet tower was completed by mid-November and the concrete items were placed to the appropriate location. Refilling and heightening the valley closing barrage (dam) was accomplished at the end of November (i.e. by using the dried mud dredged from Lake Kűvölgy #2). The compression of the damn was accomplished and the wave protection was constructed in December 2015.

The construction works were completed on 31st January 2016. The technical takeover procedure took place on 16th February 2016 (for the Minutes of the technical handover-takeover please refer to Annex to Action C.1).

After the completion of the construction works, regular maintenance activities and accidental technical repairs are performed by the subcontractor. Workers of KASZÓ implemented some minor repair works (e.g. shovelling after heavy rainfalls in 2016, or treading). The water rights implementation permit (vízjogi üzemeltetési engedély) was obtained on 11th May 2016 (the permit is attached to the PR as an annex to Action A.3).

Although the construction works were finished at the beginning of 2016 and the water rights implementation permit was obtained in mid-2016, the action was finished only in February 2017. The reason for this is that logging activities in the location of Lake Kűvölgy #4 could be implemented with delays due to the extreme wet soil (no tree cutting could be made since it was dangerous to step on the wet soil by machine). Lake Kűvölgy 4 was filled in with water in February 2017.

The second subsidy contract modification amended this action with two new activities:

- A. Removing chumps
- B. Installing wild alarms

Regarding A. (Removing chumps), following a simple procurement procedure, KASZÓ has contracted Sziget Melor Ltd. for the elaboration of the activities. Works were carried out under dry conditions, during the autumn months until 24th October 2018.

Under B. (Installing wild alarms), KASZÓ has purchased the wild alarm system from Nowton Ltd. Since there are no other suppliers that has on offer a thief proof wild alarm system in Hungary, the purchase was made from this sole supplier. Following the delivery of the goods, the system was installed on their designated posts.



Following the installation of the wild alarms, tredding significantly decreased on the dams, the wild alarms proved to be successful.

The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
C.5	Valley-closing barrage of Kűvölgy #4 built	31/12/2014	30/11/2015	Done. The delay was caused by the dragging permit procedure.

There were no deliverables set for the action. The milestone is met: the valley-closing barrage was built almost one year later than planned, due to the dragging permit procedures.

Action		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
		planned																					
C5	actual																						

 planned in the modified proposal
 done

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- Photo: 1_Lake Kűvölgy 4 before the work.JPG
- Photo: 2_Lake Kűvölgy 4 during the work.JPG
- Photo: 3_Lake Kűvölgy 4 during the work.JPG
- Photo: 4_Lake Kűvölgy 4 during the work.JPG
- Photo: 5_Lake Kűvölgy 4 after removing chumps.JPG
- C5 Contract - A. Removing chumps (Szerződés C5 tuskózás).pdf
- C5 Handover-takover report (Átadás-átvételi jegyzőkönyv).pdf
- C5 Notification of companies giving offers - A. Removing chumps (Tuskózás kiértékelések).pdf
- C5 Offers - A. Removing chumps (Tuskózás árajánlatok).pdf
- C5 Report on procurement - A. Removing chumps (Tuskózás jegyzőkönyv árajánlatokról).pdf
- C5 Requests for offers - A. Removing chumps (Tuskózás árajánlatkérő).pdf

Action C6 Retention of watercourses

The activities of the action are *completed*. The activities of Action C.6 were implemented in the course of Phase II of the construction works. The technical handover of the construction area took place on 26th October 2015.

Works started on 8th January 2016 in the planned locations. Altogether 123 bottom thresholds were installed by 31st January 2016. Please note that a mistake was made in the revised project proposal. The figure for bottom thresholds (230 pcs) were by mistake left unchanged in Action C.6 although the technical plans included 123 thresholds.



After the completion of the installation works (for the Minutes of the technical handover-takeover please refer to Annex to Action C.1), regular maintenance activities and accidental technical repairs are performed by the subcontractor.

The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
C.6	First bottom threshold or step built	15/10/2014	08/01/2016	Done. (Please note that a mistake was made in the revised project proposal. The figure for bottom thresholds (230 pcs) were by mistake left unchanged in Action C.6 although the technical plans included 123 thresholds.)
	100 bottom thresholds or steps built	30/11/2014	31/01/2016	
	230 123 bottom thresholds or steps built	31/12/2014	31/01/2016	

There were no deliverables set for the action. The milestones are met: the thresholds are built by 31st January 2016.

Action		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
C6	planned																						
	actual																						

 planned in the modified proposal
 done

Action C7 Reconstruction of service roads



The activities of the action are *completed*. The activities of Action C.7 were implemented in the course of Phase I of the construction works. The official technical handover of the construction area took place on 30th June 2015. The main activities were accomplished until November 2015: The mud dredged and dried out in the course of Action C.3 (please refer to Chapter 5.1.7 of the MTR) had been used during the reconstruction of the service roads in altogether 7.450 m (the planned and foreseen was 6 km). Construction works were completed on 15th December 2015 with the technical handover-takeover procedure (for the Minutes of the technical handover-takeover please refer to Annex to Action C.3), KASZÓ performs eventual repairs. KASZÓ was performing eventual repairs.

The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
C.7	Service roads reconstructed	31/12/2014	15/12/2015	Done.

There were no deliverables set for the action. The milestone is met: the service roads are reconstructed but the milestone was met almost one year after the set deadline.

Action C7		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																						
	actual																						

 planned in the modified proposal
 done

Action C8 Suppression of invasive species

The elimination works of invasive plant species started on 3rd March 2014 and were completed by the end of October 2018.

The elimination of invasive species – excluding the winter period – was carried out continuously. The activities are carried out by the physical workers of KASZÓ supervised by the technical supervisors of KASZÓ. Experts of NAIK-ERTI provided advisory support.

Elimination works were carried out on 287,93 hectares of the project area. 276,43 ha were treated manually and chemical treatment was necessary on an additional 11,5 ha. The map illustrating the areas that were cleared off together with photos on the elimination works are annexed to each report.

The elimination of invasive plant species was performed by applying mechanical methods: scything and the use of motoric saw were used in the elimination of Robinia pseudoacacia, Prunus serotina, Acer negundo, Ailanthus altissima and Solidago gigantea species. In hot weather in the summer season the workers of KASZÓ received sufficient protection (extra water <védőital> and resting time) and eliminated the invasive plants during the early morning hours.

Elimination works are generally implemented in the March-October period of each year. Please note that elimination works in 2017 started only in April, since due to the extreme cold weather in winter plants, including invasive species, grew slower.

The following table contains the schedule of mechanical treatments elaborated within this action.:

Month	Forest parts	HA
April 2014	Kaszó 9 R, Kaszó 10 K, Kaszó 21 D, Somogyszob 21 O, Somogyszob 25 A, Somogyszob 25 J, Somogyszob 30 E, Somogyszob 30 K	29,74 ha
May 2014	Kaszó 11 E, Kaszó 11 L, Kaszó 18 J, Kaszó 18 N, Kaszó 21 D, Kaszó 21 L, Kaszó 26 H, Somogyszob 30 E, Somogyszob 25 A, Somogyszob 25 I	17,84 ha
June 2014	Kaszó 10 J, Kaszó 11 H, Kaszó 20 E, Kaszó 21 E, Kaszó 25 I, Kaszó 39 A, Kaszó 39 I, Kaszó 39 M, Somogyszob 25 A, Somogyszob 31 H, Somogyszob 34 C	30,28 ha
July 2014	Kaszó 9 F, Kaszó 10 M, Kaszó 11 K, Kaszó 11 E, Kaszó 16 A, Kaszó 17 F, Kaszó 17 I, Kaszó 18 A, Kaszó 21 A, Kaszó 21 C, Kaszó 21 E, Kaszó 21 N, Kaszó 21 R, Kaszó 21 S, Somogyszob 22 B, Somogyszob 25 F, Somogyszob 25 G, Somogyszob 29 F	53,21 ha
August 2014	Kaszó 10 J, Kaszó 11 L, Kaszó 21 G, Kaszó 21 N, Kaszó 26 I, Somogyszob 21 A, Somogyszob 22 B, Somogyszob 22 F, Somogyszob 30 A	26,75 ha
September 2014	Somogyszob 24 G, Somogyszob 24 I, Vése 14 F	12,43 ha
October 2014	Somogyszob 25 A, Kaszó 16 A, Kaszó 21 E, Kaszó 39 A, I, M	11,99 ha
November 2014	Somogyszob 25 I, Somogyszob 30 E, Somogyszob 31 H, Kaszó 20 E, Kaszó 26 H	17,53 ha
March 2015	Kaszó 9 H, Kaszó 9 M, Kaszó 11 H, Kaszó 18 J, Kaszó 19 O, Kaszó 19 P, Kaszó 21 C, Kaszó 36 L, Kaszó 36 D, Somogyszob 24 I, Somogyszob 25 D, Somogyszob 31 K, Somogyszob 32 H	22,41 ha
April 2015	Kaszó 11 E, Somogyszob 24 G, Somogyszob 25 I, Vése 14 F	10,65 ha
May 2015	Kaszó 21 O, Kaszó 21 J, Somogyszob 34 C	7,36 ha
June 2015	Kaszó 16 A, Kaszó 18 A, Kaszó 18 J, Kaszó 19 K, Kaszó 20 A, Kaszó 20 E, Kaszó 21 J, Kaszó 26 I, Kaszó 38 Q, Somogyszob 25 G, Somogyszob 29 F, Somogyszob 34 C	22,60 ha
July 2015	Kaszó 10 J, Kaszó 17 F, I, Kaszó 18 N, Kaszó 19 K, Kaszó 39 A, M, I, Somogyszob 22 B, Somogyszob 29 F, Somogyszob 32 G	23,94 ha
August 2015	Kaszó 9 F, Kaszó 11 H, K, Kaszó 17 F, Kaszó 19 K, Kaszó 20 A Kaszó 21 E, N, Kaszó 26 K, Somogyszob 22 B, Somogyszob 25 F, Somogyszob 31 H, Somogyszob 33 G	43,41 ha
September 2015	Kaszó 10 D, Kaszó 11 L, Kaszó 21 L, Kaszó 21 N, Somogyszob 24 F, Somogyszob 24 G, Somogyszob 25 I, Somogyszob 33 B	26,55 ha
October 2015	Kaszó 21 E	7,06 ha
March 2016	Kaszó 21 L, P, S, Kaszó 26 D, L, Somogyszob 24 H	19,11 ha
April 2016	Kaszó 10D, Kaszó 19 D, Kaszó 21 L, Kaszó 27 F és G	13,82 ha
May 2016	Kaszó 10 D, Kaszó 11 B, Kaszó 18 J, Kaszó 20 A, Somogyszob 34 C	25,98 ha
June 2016	Kaszó 9 H, R, Kaszó 11 E, G, H, K, Kaszó 17 C, Kaszó 19 K, Kaszó 20 E, Kaszó 26 D, I, Somogyszob 29 F, Somogyszob 31 H	26,23 ha
July 2016	Kaszó 18 N, Kaszó 19 N, Kaszó 20 A, Kaszó 26 H, K, D, Kaszó 39 A, I, M, Somogyszob 25 G, I, Somogyszob 29 F, Somogyszob 30 A, Somogyszob 31 H, L, Somogyszob 33 B, G	29,98 ha

Month	Forest parts	HA
August 2016	Kaszó 10 D, Kaszó 11 G, L, Kaszó 17 C, Kaszó 18 A, Kaszó 19 K, Kaszó 21 G, N, S, Somogyszob 22 B, Somogyszob 23 D, Somogyszob 25 F, Somogyszob 29 F, Somogyszob 34 C, Szentá 2 M	40,94 ha
September 2016	Kaszó 19 N, Kaszó 26 H, I, K, Kaszó 39 A, I, M, Kaszó 40 E Somogyszob 29 F, Somogyszob 31 H	18,39 ha
October 2016	Kaszó 18 C, 40 D, Somogyszob 24 F, 24 G, 29 F, 30 A, 31 N	19,91 ha
April 2017	Kaszó 20 B, Kaszó 21 L, Kaszó 26 F, Somogyszob 25 H, Somogyszob 25 J, Somogyszob 33 G, Szentá 10 C	26,20 ha
May 2017	Kaszó 17 I, Kaszó 21 N, Somogyszob 22 B	11,73 ha
June 2017	Kaszó 11 K, Kaszó 17 F, Kaszó 18 C, 18 J, Kaszó 21 A, Somogyszob 34 C	19,93 ha
July 2017	Kaszó 9 F, 9 R, Kaszó 11 E, 11 H, Kaszó 18 A, Kaszó 21 S, Somogyszob 24 F, Somogyszob 25 G, Somogyszob 29 F	28,72 ha
August 2017	Kaszó 16 A, Kaszó 19 K, Kaszó 20 A, Kaszó 21 C, 21 G, Somogyszob 22 B, Somogyszob 25 I, Somogyszob 29 F, Somogyszob 30 A	29,11 ha
September 2017	Kaszó 11 L, Kaszó 17 I, Kaszó 20 E, Kaszó 21 C, 21 E, 21 S, Kaszó 26 D, Kaszó 40 D, 40 E, Somogyszob 25 F, 25 I	17,17 ha
June 2018	Kaszó 16 A, Kaszó 17 I, 17 F, Kaszó 20 A, Kaszó 21 E, 21 N, 21 R, 21 S, Somogyszob 24 G, Szentá 8 C	32,23ha
July 2018	Kaszó 9 F, Kaszó 10 J, Kaszó 11 B, 11 H, Kaszó 18 C, Kaszó 21 G, Kaszó 40 D, Somogyszob 25 G, Somogyszob 31 H, 31 L, Somogyszob 32 R	28,45 ha
August 2018	Kaszó 16 A, Kaszó 17 F, 17 I, Kaszó 18 N, Kaszó 21 S, 21 R, Kaszó 26 D, Kaszó 27 H, Somogyszob 22 B, 22 E, Somogyszob 24 G, Somogyszob 29 F, Somogyszob 30 A, Szentá 2 M	44,33 ha
September 2018	Kaszó 9 B, 9 G, Kaszó 20 A, Kaszó 39 A, 39 I, 39 M, Somogyszob 22 E, Somogyszob 29 F, Somogyszob 31 H, Somogyszob 34 C	28,49 ha
October 2018	Kaszó 17 C, Kaszó 18 C, Kaszó 20 E, Kaszó 21 A, 21 E, Kaszó 26 D, Kaszó 27 H, Somogyszob 22 B, Somogyszob 24 F, Somogyszob 33 G	21,82 ha

Besides applying mechanical methods in the elimination of the invasive plant species, chemical treatment was also performed in certain areas and periods. Since the concerned forest parts were heavily infected, applying mechanical treatment would not have been successful.

The procurement for contracting the external expert for chemical treatment started in June 2016 by sending the invitations to the following three companies: Oberleiter-Agro Bt., Áfonya Bt. and SM Consulting Erdő és Természetvédelmi Kft.) The contract with the winner (SM Consulting Erdő és Természetvédelmi Kft.) was signed on 15th June 2016. (For the contract signed with the subcontractor please refer to Annex to Action C.8).

SM Consulting Ltd. performed chemical treatment of Prunus Serotina species in the following forest parts: Kaszó 11 G and Kaszó 11 H. 7 hectares was treated by spraying. Regarding Ailanthus altissima species the subcontractor carried out lubrication of barks and trunk injection activities. Lubrication was carried out in case of trees with 1-2 cm trunk diameter. Ailanthus altissima chemical treatment was performed in Somogyszob 32 G forest part in 4,5 ha.

SM Consulting Ltd. performed chemical treatment between June 2016 and May 2018 in Somogyszob 32G, Kaszó 11G and Kaszó 11H forest parts on total 11,5 ha area. Work were repeated 1-2 times return yearly, in order to guarantee the successful elimination of invasives.



Overall effectiveness of invasive plant control activities has been screened by ERTI in November 2018. Presence and condition of *A. negundo*, *A. altissima*, *P. serotina* and *R. pseudoacacia* have been assessed in temporary plots (5x5 m, 4 plots/ha) placed randomly in the affected forest subcompartments. Number of invasive plants with at least one intact shoot older than the years spent since the last treatment has been recorded. Additionally, actual or potential (3+ years old) seed producing specimens have been counted in the whole area of the subcompartments. The results show proper quality invasive plant control with an average of less than 7 intact shoots per hectar and none or negligible amount of potentially flowering trees remaining.

The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
C.8	IAS control started	01/02/2014	03/03/2014	Done.
	IAS cleared off	31/12/2014	31/12/2014	Done.
	IAS cleared off	31/12/2015	15/12/2015	Done

There are no deliverables relating to this action. The milestones scheduled for the reporting period are met: although the IAS control started about a month later than planned in the project proposal, the subsequent milestones are met as per scheduled.

Action		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
		planned																					
C8	actual																						

 planned in the modified proposal
 done

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- 0_Overall maps of the locations where the elimination was performed 2018.jpg
- Photo: 2_Lake Kűvölgy 4 during the work.JPG
- 1_Robinia pseudoacacia before the work.JPG
- 2_Elimination of Robinia pseudoacacia.JPG
- 3_Robinia pseudoacacia after the elimination 1.JPG
- 3_Robinia pseudoacacia after the elimination 2.JPG
- 4_Prunus serotina before elimination.JPG
- 5_Elimination of Robinia pseudoacacia.JPG
- 6_Prunus serotina after elimination.JPG
- 7_Ailanthus altissima before elimination.JPG
- 8_Elimination of Ailanthus altissima.JPG
- 9_Ailanthus altissima after elimination.JPG

Action D1 Monitoring of the impact of project actions on priority habitats

The activities of the action are *completed*.

Planning phase:

The action started on 11th October 2013 with the planning of monitoring. The planning phase of the monitoring system was completed as per scheduled in the project proposal. The monitoring plan was drafted in month October 2013 and finalised by 28th October 2018.

Equipment:

As reported in section 5.1.1 of the Inception Report all equipment necessary for the implementation of the action were purchased with the exception of the meteorological station (please refer to section 5.1.1 of the Inception Report), which was completed in July 2014. The delay did not cause further delays in the action.

Initial monitoring activities:

The selection of monitoring sample parcels and quadrates was implemented between 5-7th November 2013. As per the project proposal 10 sample parcels were assigned in areas with Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, *Alnus incanae*, *Salix alba*) habitats and 4 sample parcels with *Quercus robur* species were also selected. There were 2-2 sample areas assigned for control purposes outside the project area. The monitoring is performed – as per set in the project proposal – by the own personnel of ERTI. The staff of KASZÓ provides assistance (i.e. in installing groundwater observation wells).

The creation of the monitoring areas was completed in April 2014 by selecting and marking (numbering) 100-100 sample trees per sample parcel. The botanic quadrates were allotted and the groundwater observation wells were installed.

The level of the groundwater has been registered on a weekly basis since May 2014, as per planned and scheduled. The meteorological station was installed and has been operating since the end of October 2014. The weather parameters identified by the monitoring plan are registered on a 10-minute basis. The series are real-time available at <http://met.boreas.hu/erti/>. (There was a smaller breakdown of the station in August 2015 resulting in a negligible data loss but having no threat to the daily interpretation of the registered figures.)

Health status assessments of the 100-100 trees selected and individually identified in the sample areas have been implemented since the spring of 2014 by applying the ICP Forests methodology (www.icp-forests.org/Manual.htm), which is adopted both by the national Forest Protection Assessment and Monitoring System (EMMRE – Erdővédelmi Mérő- és Megfigyelő Rendszer) and project FutMon (LIFE07 ENV/D/000218 – Further Development and Implementation of an EU-level Forest Monitoring System). Assessments are performed twice a year: (i) at the end of May or beginning of June, and (ii) at the end of the vegetation period.

The botanic sample takings started as per scheduled in the monitoring plan. Plant species and parts are being collected from the beginning of April 2014 in order to use for plant definition purposes in the future. After reaching the appropriately large cover of the spring aspectus the detailed botanic surveying started on 16th April 2014. The activities finished on 9th May.

Botanical assessments in the sample areas (covering 400-400 m² ground-space) are implemented also by applying the above referred methodology. The dates assigned for coenological data collection and registration considers the period foreseen as the greatest possible coverage of the spring and summer aspectus: it was performed at the end of April – beginning of May or the second half of July so far in the project (in 2014: 7-9th May and 28th July-1st August, in 2015: 4-8th May and 27-31st July). Due to the early spring presence of the bulbous and tuberous plants an additional data were collected for registration in the course of an on-site visit at the beginning of

April 2015. With the aim of plant identification and documentation completing the on-site data collections NAIK-ERTI has started the elaboration of a reference-collection, which currently includes almost 90 herbarium pages.

Considering that the construction works have started in the second half of 2015, data collections for the baseline survey have finished. The digital registration and archiving of the data gained during the on-site collections, the evaluations are performed. The results of the baseline surveying were shared with the media and the general public in the course of the 2nd public information meeting (please refer to the description in Chapter 5.2.2.4 and 5.2.2.5 of the MTR).

The spring botanical surveying ended in the second week of May. The health condition monitoring activities were scheduled between 19.05.2014 and 06.06.2014 by applying the methodology set in the monitoring plan.

Mid-term monitoring activities

The digital registration and archiving of the data gained during the on-site collections started after the commencement of the construction works within the conservation actions (please refer to chapter 5.1.13 of the MTR). Evaluations were performed in October and November 2015. The processing of the evaluation results and the elaboration of the baseline survey report started in December 2015. The survey report is attached (please refer to Annex to Action C.8).

Preparations for the spring botanical assessment (e.g. visiting the sample plots and checking if sticks marking the corners of the areas are still in place) were implemented in March 2016. Botanical assessments in the sample areas (covering 400-400 m² ground-space) are implemented by applying the referred methodology in the MTR (Please refer Point 5.1.13). The dates assigned for chronological data collection and registration considers the period foreseen as the greatest possible coverage of the spring and summer aspectus. Regarding the year of 2016, the experts of NAIK-ERTI started the assessment of the bulbous and tuberous plants in April. The botanical assessments of the spring aspectus and reference-collections were implemented in 14 sample areas in May. Health status assessments were performed in early summer (June 2016). Reference-collection of the herbarium was implemented at the end of June in the course of the on-site visits to the monitoring areas. The summer aspectus botanical assessment was performed in the period of 25-29th July 2016. The experts of NAIK-ERTI assessed the summer-end health status in 6 sample areas in August and 12 sample areas in September 2016. The processing and identification/determination of the spring reference-collection of the herbarium started in September. The digital registration and archiving of the data gained during the on-site collections, the evaluations started in September 2016.

Similar to the previous years, the level of the groundwater has been registered on a weekly basis in the current reporting period too. Groundwater levels and meteorological data were archived, the controlling of data quality was performed, and the registry of data gaps and lacks referring to the entire measurement period (from the start date) was elaborated. Daily, monthly, growing-seasonal and yearly means and sums were calculated. Drought and aridity indices (aszály- és nedvességellátottsági indexek) were identified. Selection of vegetation and water supply indices calculated from remotely sensed spectral data referring to the project area has also started.

By mid-March 2017, the early-spring bulbous and tuberous plants in botanic parcels were assessed and botanical assessment preparations were also carried out.

Health status assessment of the sample trees in the monitoring plots, repeated twice a year, took place in 12–22. June 2017, 28. August 2017 – 1. September 2017. and 28. May – 8. June

2018. Identification of pests and diseases registered during the surveys has been carried out on site. So far, data analyses indicated slight improvement in the health status of the project area monitoring plots compared to the control plots both in the case of oaks and alders in 2017.

Coenological surveys were scheduled to meet the estimated period of maximum ground coverage of the herbaceous layer in the spring and summer aspectus. Accordingly, botanical assessments have been carried out in 24–28. April 2017, 7–11. August 2017, 2–9. May 2018 and 30. July – 3. August 2018. Additionally, targeted survey has been carried out in 5. April 2018 in order to identify and quantify geophytes and early therophytes that are hard or impossible to assess at later coverage developmental stages. The identification of the plants collected for the reference herbarium in 2017 has been finished in March 2018.

Meteorological data sets have been recorded and archived according to the Monitoring plan. No significant data loss or sensor malfunction happened in the current reporting period. Daily, weekly, monthly, seasonal, yearly and vegetation period means and sums were calculated. Additionally, drought and aridity indices, identified as appropriate for the data analyses in the previous period, have been calculated.

The level of the groundwater table in each monitoring plots has been recorded in weekly basis. The condition of the wells has been assessed in 01. February and 04. May 2018. The well depth in two monitoring plots decreased; however, the silt accumulated in these wells does not effect the data accuracy at the moment. Ground water and meteorological data have been analysed for the period of 2014-2017. Preliminary results that have been presented during the Conference indicate slight but statistically significant change in the water supply of the project area monitoring plots compared to the control plots (Eötvös–Horváth 2018, in press).

Tree ring analysis was carried out in order to overcome the difficulties caused by the exceptionally high precipitation of the baseline period. Aims of the research were to indicate effects of the increased groundwater level and its more balanced interannual course due to the conservation. Preliminary results that have been presented in the Conference reveal stronger relationship of alder growth with climate (first of all, with summer rainfall and mean relative humidity) than in case of oak, even when considering the generally higher groundwater level of alder stands. However, a series of severe drought years after 2000, selected by the 6-month SPEI drought index and decrease in alder increments indicate that growth decrease of alder stands were well below the increment loss at the control site following the conservation actions, though a reverse tendency was common during all the previous drought periods (Garamszegi et al. 2018, in press).

Final monitoring activities

The activities of the action have been concluded according to the Monitoring plan. Meteorological data sets have been recorded and archived according to the Monitoring plan. No significant data loss or sensor malfunction happened in the current reporting period. The level of the groundwater table in each monitoring plots has been recorded on weekly basis. Groundwater level sensors have been installed in December 2018 in order to facilitate automatic, long-term recording of changes in groundwater level during the post-project phase. Second health status assessment of the sample trees in the monitoring plots took place in September 2018; the last botanical survey has been carried out in August 2018. The

identification of the plants collected for the reference herbarium in 2018 has been finished in November 2018.

Joint analysis of ground water level and meteorological data on calendar year basis has revealed slight but statistically significant change in the water supply of the project area monitoring plots compared to the control plots. The results indicated that *the speed of ground water level decrease had been reduced due to the implemented water retention measures* (Eötvös – Horváth 2018). However, current precipitation is not sufficient for stabilizing the dropping ground water level.

Double mass curve analysis of cumulative ground water depth data, on hydrological year basis, with a break point coinciding the conservation actions, has demonstrated the benefits of the water retention measures in 10 monitoring plots. The effects were close to instant in the vicinity of the Kűvölgy Lakes. Comparative analysis of vegetation period ground water levels before and after the C actions has shown that *supplement of ground water is very effective within a radius of about 200 metres of the reservoirs with raised water level. Slowdown of the surface water runoff contributes to the water supply, but less effectively and temporally*. It appears only in short periods, usually in spring, when water supply is favourable anyway. In case the inventions are not executed, arid years result in 40-80 cm lower ground water levels.

Health status data analysis has revealed high level temporal variability between 2014 and 2018 in all cases (in oak and alder stands, in project and control monitoring plots). Overall leaf loss (LL) and branch dieback (BD) were identified as good descriptors for the health status of monitoring plot populations. Yearly average of LL was significantly lower in alder stands than in oak stands, 5-10% and 15-20%, respectively. Until autumn 2016, the average LL in project plots was higher than in control plots. This trend has changed in 2017. The same progression was observed in oak stand BD, while in case of alder plots, the BD was continuously higher in control plots. The causes and/or agents of LL and BD (abiotic damages, pathogen and herbivore insect pressure) are numerous and their impact had been varying yearly, seasonally and per tree species. In case of alder stands, leaf herbivory and storm damage were identified as dominant causes for LL. No exclusive cause/agent was found for project plots or control plots. Complex dieback symptom was found to be the primary factor behind LL and BD in oaks. Additionally, late winter and spring storms increased the LL and twig dieback rates; and late frost damage was observed in 2016. *In summary, progression in the health condition of monitoring plot alder and oak stands was observed simultaneously with the C actions.*

The same trend and timing was observed in the yearly increment data (Garamszegi et al. 2018). Originally, tree ring analysis had been included in the monitoring plan to overcome the difficulties caused by the exceptionally high precipitation of the baseline period. The results revealed stronger relationship of alder growth with climate, first of all, with summer rainfall and mean relative humidity, than in case of oak, even considering the generally higher groundwater level under the alder plots. During a series of years with severe droughts in the vegetation period, that had been selected on the basis of 6-month SPEI drought index and decrease in alder increments, the tree ring width analysis has shown that *the increment loss in project area plots was lower than in control plots following the conservation actions*, though a reverse tendency was general during all the previous drought periods.

Coenological surveys were included in the monitoring system in order to detect changes in the texture of vegetation resulted by water supply improvement. Although the species composition of ground level vegetation was expected to react at a much slower rate and on a longer scale than ground water level or health status parameters, initial changes had been observed already. In total, more than 220 vascular plants, including 10 protected species, was found in the ground layer of the botanical quadrates of the monitoring plots. The maximum of the total species per plot count for the period of 2014-2018 was 102 (no. 6, project area plot,



black alder), the minimum was 32 (no. 4, control plot, black alder). Generally, the highest per assay species number was observed in alder stands on relatively dry sites, while oak stands with hornbeam lower canopy held the weakest ground level vegetation. Typical alder stands on low sites (ground water level above ground level for 2+ weeks) had 75-90 species in total, and 50-60 per assay. Notable changes in these plots indicate the effects of the prolonged water cover and the improved water supply during the vegetation period. Although these factors may interfere, they result in slight improvement of species counts and dominant species number. In case of project area plot no.1 and 9, the long-lasting water cover decreased both the ground layer cover and the species count; and the onset of the tussock formation can be observed. The botanical surveys in the project area contributed 20 novel species occurrence data for the Atlas Florae Hungariae.

The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
D.1	Monitoring plan	31/10/2013	28/10/2013	Done
	Elaboration of one monitoring plan	15/10/2013	15/10/2013	Done
	Sample parcels and quadrates defined	15/11/2013	30/04/2014 (07/11/2013)	Done Although the designation of the parcels was completed by 07/11/2013, the creation of the monitoring area (selecting the sample trees) was finished later.

The deliverable set for the action was met: the monitoring plan was ready by 28th October 2013 (as scheduled in the project proposal – attached as Annex 7 to the Inception Report). The milestones of the action were met: (i) the monitoring plan was elaborated by the deadline, (ii) sample parcels and quadrates were defined 5 months later than planned. The delay did not influence the implementation of other activities of the action or other actions.

Action	D1	2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
		planned																					
		actual																					

 planned in the modified proposal
 done

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- KASZÓ-LIFE D1 Egészségügyi adatok.zip (Health status data)
- KASZÓ-LIFE D1 Meteorológiai adatok.zip (Meteorological data)
- KASZÓ-LIFE D1 NDVI adatok.zip (NDVI data)
- KASZÓ-LIFE D1 Botanika adatok.xlsx (Botanical data)
- KASZÓ-LIFE D1 Monitoring jelentés 2014-2018.pdf (Monitoring report)
- Monitoring report summary in English
- KASZÓ-LIFE D1 Talajvízszint adatok.xlsx (Ground water level data)

Action D2 Assessment of the socio-economic impact of the project actions on the local economy and population as well as on the ecosystem functions

The activities of the action are *completed*. The activities of the action have been initiated in April 2018. Experts have been approached to elaborate the methodology of socio-economic impact assessment.

The activities of Action D2 had been concluded in December 2018 according to the work plan. The expert team, employed by one of the most important private forest owner of the region, was familiar with the project and with the features of the local population and economy. Data sets from targeted surveys for the visitors of the project's events and the educational trail had been analysed. Project-specific event attendance data and touristic data were collected for the project duration. Penetration data of the project's dissemination activities, media appearances and online communication was summarized.

The results of the study shown that about 50% of the local permanent population (that is 99 capita) was involved in at least one project information or dissemination event, while over 220 non-local residents attended. The age distribution was dominated by the 30-45 class, while the gender balance was around 60:40% in favour of men. In case of guided tours, 40% of the attendance was infant; the rest was professional audience including colleagues from forestry administration, hydrology experts, forest and conservation managers. The gender balance was similar than in the public information meetings. Online penetration data has shown over 22 000 individual hits on the project web site, with sharp rise in attendance during the last year. However, decreasing trend in the time spent on the site was also observed.



The targeted survey included questions on general perception and knowledge on forest and forestry-related topics and project-specific questions. The answers have shown that the vast majority of respondents is regular forest visitor, a small fraction of them occasionally visits the forests. Every respondent considers forest to be of great importance to citizens, the role of forests was considered as 'important' or 'essential' in general or in point of view of specific forest services. The distribution of answers received on project specific question reflects good perception of (i) the project in general; (ii) effective project communication activity; (iii) the importance of water retention program in the local forests and (iv) the project's contribution to the nature conservation efforts.

Regarding local tourism, both the demand (number of guest nights spent in Kaszó) and the local accommodation capacity have increased in the period of 2013-2017 from 29 to 832, and from 72 to 126, respectively. Per se, this improvement could not be addressed solely to the KASZÓ-LIFE but the project contributed to the sharp rise of visitors in the area.

Deliverable: Socio-economic impact study: 31/08/2018

Milestone: Socio-economic study ready: 31/08/2018

Action D2		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																						
	actual																						

 planned in the modified proposal
 done

TECHNICAL ANNEXES\Submitted with current 5 FINAL REPORT\Annex D2\

- Socio-economic impact study (KASZÓ-LIFE D2 Tanulmány.pdf)
- Socio-economic impact study summary in English
- Annexes to the Socio-economic impact study: Questionnaires (KASZÓ-LIFE D2 Kérdőívek.pdf)

Action D3 Detailed habitat mapping

The activities of the action have been initiated in June 2018. External experts have been contracted to carry out pedological and hydrological surveys in the project area in order to develop a site map with special focus on detailed soil type data. The site map was extended by a hydrodynamic model that enabled modelling and projection of future water supply of priority habitats based on meteorological data. The sampling strategy and the preliminary network of survey sites were specified in July 2018. Field activities of the Action D3, including the selection of survey sites, levelling of groundwater level wells, soil profiles excavation and sampling, have been initiated in the last days of 2018 July and concluded in August 2018. Lab analysis of the soil samples, data analysis, site and hydrological modelling took place from September to December 2018, as planned.

73 soil profiles were opened along several site-specific catenas. Field and laboratory tests defined soil-types according to the soil moisture dynamic/balance of upper layers can be divided into three main groups. Driest soil-types, that are situated in the upper third of the sand dunes and for which accumulation of the clay and iron colloids are not specific, are haplic Arenosol dystric, humic soils and haplic Cambisol arenic soils. Because of the evolved clay, hydrology of soils with lamellic accumulation of clay (lamellic Arenosols, lamellic Gleysoils dystric, and in-the-depth lamellic haplic Cambisol arenic soils, cutanic Luvisol arenic soils, moreover the umbric Gleysoils dystric, arenic, siltic, clayic soils) is more favourable. Most favourable hydrology and persistently wet hydrological features have the following soil types: umbric Gleysoils dystric, umbric Gleysoils arenic soils and histic Gleysol arenic soils. The soil type 'Umbric Gleysoils dystric, arenic, siltic, clayic' have an extension to more than half of the researched area, due to the surplus water effect.

Based on the digital surface model of the project area, the spatial extension of the point data sets from the field and lab analyses resulted in a site model including hydrology, soil-type, rooting depth, soil texture and water availability parameters.

Hydrological investigations at the eastern side of the Kűvölgy Lakes revealed that the effect of the elevated water level of the lakes is strong and permanent within 200 meters. Reduction of the runoff speed of the small streams proved to be less effective spatially and temporally. Bottom dykes function only, per se, when surface water is present, so the benefits are appearing in periods when water is abundant anyways. However, prolonging the water cover period, the dykes contribute to delay the ground water level drop in summer.



Arid years result in 40-80 cm ground water level sinking, both in the control area and in the near vicinity of the project area. Similar ground water level drop was projected to the project area without the interventions of the project.

Deliverables:

Detailed habitat analyses database: 30/11/2018

Digital habitat map: 30/11/2018

Action D3		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																						
	actual																						

 planned in the modified proposal
 done

TECHNICAL ANNEXES\Submitted with current 5 FINAL REPORT\Annex D3\

-
- Detailed habitat mapping report (KASZÓ-LIFE D3 Jelentés.pdf)
 - Detailed habitat mapping report summary in English
 - Detailed habitat analyses database I (KASZÓ-LIFE D3 Szervényleírások.pdf)
 - Detailed habitat analyses database II (KASZÓ-LIFE D3 Termőhelyfeltárás adatok.pdf)
 - Digital habitat map (KASZÓ-LIFE D3 Termőhelytérkép fedvények.pdf)

5.2 Dissemination actions

5.2.1 Objectives

Summarise the objectives of the dissemination plan set out in the revised project proposal.

One of the most important communication objectives of project was to disseminate the long-term results and present best practices applied during the implementation of the conservation and monitoring actions. The project aimed also at sharing information not only with the local inhabitants who might benefit directly from the project impacts, but also with the management of other LIFE+ projects, in order to raise their level of awareness and prevent harmful activities due to lack of information and understanding.

Besides the “traditional” dissemination tools (i.e. project website, newsletters) several innovative communication actions served the spread of the idea, results and achievements of the project. Forestry professionals and the general public were educated on environmental protection practices.

Forestry personnel working on the project area and in the surrounding territories was one of the dissemination target groups of the project. In order to best assist their nature responsibility during their work, an educational package was developed which was shared with the colleagues in the course of two trainings serving also to communicate the most important messages of the project.

All widely applicable experiences were disseminated on international level, in particular to stakeholders of other LIFE+ projects. Exchange of best practices with LIFE+ initiatives taking place in other EU countries was supported. Cross-sectoral and international cooperation was promoted during our international conference. Communication with the general public was implemented via public information meetings, information materials and multimedia documents.

5.2.2 Dissemination: overview per activity

Action E1 Online Communication

The action started on 18th September 2013 by the registration of the domain of the website (www.kaszo-life.hu and www.kaszo-life.eu).

The tasks of creating and developing the bi-lingual official project websites, as well as the development of the project visual identity was subcontracted on 28th November 2013. The website is online with English and Hungarian information (in both domains) on the project area, on our actions, partners, photo gallery and news. The website is frequently updated with information on

the progress of the project. The project website became online and functional on 28.02.2014. The progress was reported to the LIFE Communication Team on 21.03.2014 and the link of the official project website is available on the LIFE project database (http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_pr oj_id=4714). The change in the contact person has also been updated (for details, please refer to Chapter 4.1 of the MTR.)

The average number of individual visitors per year was 3119 during the project implementation.

The project website started operating as per scheduled. However, in December 2014 it became “infected” and was unavailable for a couple of weeks. The website was recovered and the domain was relocated. The current host ensures the smooth operation.

In order to keep the website “fresh”, partners perform continuous press cutting activities, news are generally uploaded on a monthly basis. The progress of actions is usually registered in the website when the project reaches the set milestones, implements important events or activities and the action is completed.

After relocating the project domain and assigning a new host (please refer to chapter 5.2.2.1 of the MTR), the operation of the website is smooth. In the February-March period of 2016, the host extended/increased the capacity of the web-hosting to better meet the project needs.

The preliminary date of the international conference (Action E.10) was added to the website: (<http://www.kaszo-life.eu/hu/nemzetkozi-konferencia>; <http://www.kaszo-life.eu/en/international-conference>).

The first newsletter on the project has been compiled, translated into English and sent in early April 2017.

Invitation to the event and related information was uploaded to the web page of the conference. An external sign up form was created for the registration (<http://conference.kaszo-life.hu/> and <http://conference.kaszo-life.hu/locale/en>). The complete process of registration went through this solution. Following the international conference, presentations and other materials were uploaded to our website.

The 2nd and 3rd newsletters were prepared and forwarded to our Hungarian and international mailing lists.

NAIK ERTI contributed to the activities by translating and proof-reading website news and newsletters no. 2 and 3.

The 4th, 5th and 6th newsletters were also prepared and sent to our Hungarian and International mailing list. We were frequently updating the website with news and we uploaded the progress reports too.

Project information on our website will be available after project closure, for the required time-frame.



The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
E.1	Internet domains registered	15/09/2013	18/09/2013	Done.
	Website development contracted	15/09/2013	28/11/2013	Done
	Website is in operation	15/01/2014	28/02/2014	Done

There are no deliverables for the action set in the project proposal. Milestones were met but with small delays:

(i) the internet domains were registered on 18th September 2013 instead of 15.09.2013, (ii) the website development was contracted on 28th November 2013 instead of 15.09.2013, and (iii) the website was put in operation on 28.02.2014 instead of 15.01.2014, but still within the 6 month timeframe set in Article 13.4 of the Common Provisions.

Action		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
E1	planned																						
	actual																						

 planned in the modified proposal
 done

DISSEMINATION ANNEXES\Submitted with current 5_FINAL REPORT\Annex E1\

- 4th, 5th and 6th newsletters in Hungarian and in English:
 - E1 4th newsletter in Hungarian.pdf
 - E1 4th newsletter in English.pdf
 - E1 5th newsletter in English.pdf
 - E1 5th newsletter in Hungarian.pdf
 - E1 6th newsletter in English.pdf
 - E1 6th newsletter in Hungarian.pdf
- List of addresses in Hungarian and in English:
 - E1 List of addressees (EN).pdf
 - E1 List of addressees (HU).pdf
- Website visits and views statistics (Website statistics 092015-122018.xlsx)

Action E2 Installation of gates, informational and notice boards

The activities of the action are *completed*, gates and information and notice boards are installed by 30th April 2014. The action started on 3rd April 2014 by sending the requests for offers for manufacturing the informational and notice boards. 8 gates were installed in April 2014 at main road crossings and frequently used entryways to the project area. As per the project proposal the production of the gates was to be subcontracted. Based on the detailed calculations of KASZÓ the production of gates proved to be cheaper if produced by the beneficiary, therefore both manufacturing and installation was performed by the Beneficiary's own staff.

Applying the relevant elements of the visual identity guide of the project (please refer to section 5.1.15 of the Inception Report), the design of notice and information boards was performed by KASZÓ. Three pieces of information boards (size A1) and 17 pieces of notice boards (size A2) were installed at the main entryways to the project area. Out of the 17 notice boards 8 were placed at or near the gates installed in the course of the project. Information and notice boards were produced by a subcontracted manufacturer, the wooden framework was delivered by another manufacturer.



Further activities of the action included the checking of the gates and boards and in case of damages their repairs or replacements were to be performed.

The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
E.2	Notice boards and gates installed	31/12/2013	30/04/2014	Done

The milestone set for the action was met: notice boards and gates were installed after the deadline in April 2014, instead of 31.12.2013.

Action E2		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																						
	actual																						

 planned in the modified proposal
 done

Action E3 Development of an educational trail

The activities started in February 2016 by submitting the request for permit to create the educational trail. The permit was obtained in April 2016 (please refer to the Annex to Action E.3). Parallel with the start of the permit procedure, KASZÓ sent out the invitation to tenders to three relevant companies (Geoépker Kft., ÁK-VÍZÉP Kft. and Neu Tóth és Scheffer 2007. Kft.) for the development of the educational trail, including the installing of educational boards. The contract with the winner (GEOÉPKER Kft.) was signed on 16th February 2016. However, due to a mistake regarding the technical requirements of the educational boards, the contract was terminated and a new tender procedure was initiated. In the new tender, the same companies were invited as in the previous procedure. The new contract (with the same winner) was signed on 22nd March 2016.



A separate tender was implemented regarding for the removing the old and building new fences around the trail. The invitations were sent on 31st March 2016 to three companies (BÖRDEC Erdészeti Szolgáltató Kft., KASZÓ-ERDŐ Kft. and GRU-FA Kft.). The contract with the winner (BÖRDEC Erdészeti Szolgáltató Kft) was signed on 7th April 2016. The development of the trail started with removing the old fences. The trackline of the trail was marked and cleaned in May 2016. There are 10 small information boards (A2 size) serving educational purposes installed in the educational trail. The collection and selection of photos, elaborating the content of the boards was performed with the close collaboration and cooperation of the Beneficiaries. Two resting places were installed for larger or older groups of visitors around the trail. (For photos of the educational trail, boards and resting places please refer to Annex to Action E.3.) The activities were coordinated by KASZÓ, and NAIK-ERTI actively participated. The educational trail was completed on 15th June 2016.

Visitors, interest groups organised outside of the KASZÓ-LIFE project are regularly using the educational trail.

Milestone: Educational trail ready 30/06/2016

Actual completion: 15/06/2016

Action E3		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																						
	actual																						

 planned in the modified proposal
 done

Action E4 Media work

The action started with the preparation of the media contact list on 7th October 2013. KASZÓ has prepared a media contact list about relevant local, regional and national journalists and editors (nature protection, environmental issues, etc.). Direct contacts with media were established through phone calls.

The 1st press conference was organised at the beginning of the project by the beneficiaries in the settlement of Kaszó on the 4th December 2013. There were altogether 5 media represented in the event. The 2nd press conference was held also in the village of Kaszó. The event was linked to the progress of the construction works and was held on 27th October 2015 together with the 2nd public information meeting (please refer to Chapter 5.2.2.5 of the MTR).

In the 3PR reporting period, two press releases were sent out to the media with information on project: the 3rd press release informed the media about the completion of the construction works, while the 4th press release contained information about the educational trail and the first guided excursion.

On 15th December 2015, a short film was prepared by Hazai Vadász TV magazine about the progress of the construction works. The film was presented on 31st January 2016.

In August 2016, a contract was signed with Natura-Media Kft. (Hazai Vadász TV magazine) for the preparation of a short film by editing the existing video/TV appearances of the project. The German version of the film was presented on the first international visit at “Ausseerland“ LIFE+ project (<https://www.youtube.com/watch?v=4cwytgVDNA>).

The Hungarian Development Centre (Magyar Fejlesztési Központ) contacted with KASZÓ with the aim to present the project on their website and in the portfolio of the “Successful Hungarian projects co-financed by the EU”. The on-site visit and the personal interview were held on 11th October 2016. The project is presented at <http://nyeromagyarok.eu/kaszo-zrt.html>.

In the 4PR reporting period (between 01.04.2017 and 31.07.2018), there were 5 press releases sent out. Two general articles in national press were published. There were 3 additional general articles published in the local press. Regarding specialized articles, 2 were published. The communication through the Internet was supplemented by 10 Internet articles. We were on radio once and on TV news twice.

Additionally, NAIK ERTI has submitted or is submitting 4 papers to local scientific and general forestry periodicals on results of the health status assessments on the forest stands of the project area (Koltay 2018), on the botanical surveys (Nagy 2018), on preliminary results of the groundwater level observations linked to the project (Eötvös-Horváth 2018) and on the tree ring density analyses (Garamszegi et al. 2018). The latter two papers have already been accepted for publication by the reviewers of the Bulletin of Forest Science (Erdészettudományi Közlemények) and will be published in the BFS volume 8, issue 1.

In the final phase of the project, the 3rd press conference was organised on 14th November 2018. Representatives of 2 media were present. Based on interviews and our presentations, TV releases came out. Our press releases indicated more appearance in the media.

In total we reached the following numbers by media (01/09/2013 – 31/12/2018). In brackets, the estimated number of media as it was stated in our application:

Press releases: 20 (20);
 General article in national press: 4 (3);
 General article in local press: 8 (10);
 Specialized article: 11 (10)
 Internet articles: 49 (20);
 Radio news: 2 (3);
 TV news/reportage: 10 (3).

We had not managed to reach the proposed number in the local press and radio, but the targeted number of internet and tv appearances were over accomplished. As the internet is getting more and more important while the role of radio and printed media decreases, we believe it is a good result. Online media further shared our news via Facebook and Youtube, so the message reached an even bigger audience. KASZÓ-LIFE related posts can be found on 10 Facebook pages. The total number of views of KASZÓ-LIFE related videos on Youtube are: 6241.



The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
E.4	3 general articles in national press	31/07/2015	-	Done.
	First press conference held	31/12/2013	04/12/2013	Done.

The deliverable set for the reporting period was not met yet: due to the delayed start of the conservation actions only 2 general articles were published in the national press by the set deadline. As per the revised communication plan, the 3rd article is scheduled to be published after the completion of the construction works in order to attract interest before the start of the guided tours and other dissemination activities. The milestone was met: the first press conference was held well within the set deadline.

The annexed documentation includes the media appearances (text of articles, films shot in the area, etc.).

Action		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
		planned																					
E4	actual																						

 planned in the modified proposal
 done

DISSEMINATION ANNEXES\Submitted with current 5_FINAL REPORT\Annex E4\

- 2 radio news
- 3 press conference held
- 4 general articles in national press
- 8 general articles in local press
- 10 TV news
- 11 specialized articles
- 20 press releases
- 49 internet articles
- Facebook posts on KASZÓ-LIFE
- Press dossier Final
- Sajtó dosszié_Kaszó FINAL
- Youtube views

Action E5 Publishing of informational material

Although the activities were scheduled to start earlier, due to the delays in the construction works the publication of the informational materials was postponed in order to be able to present the progress and the spectacular results also.

The preparation of the brochure, maps and flyer started in January 2017 with selecting photos and taking further pictures, and also elaborating maps. The contents and format of the informational materials was developed in the cooperation of the Beneficiaries.

The invitations to design and print the materials were sent on 13th March 2017 to the following four companies: Zafir Print Lap Manager Kft, Reklámpark Kft, Kreatív Megoldás Kft and Reklám és Arculat Kft. The contract with the winner (Reklámpark Kft.) was signed on 23rd March 2017.

The status of the delivery of the informational materials is as follows (for original copies and digital versions please refer to Annex to Action E.5):



- brochure showing the project and natural values, introducing the Natura 2000 areas in 1000 pieces with the following parameters: 12 pages, B/5 size – Ready and printed by the date of the current PR in Hungarian in 600 copies. The English was ready by 15th July 2017.
- 1000 pieces of maps, size A/3, 4x folded - Ready and printed by the date of the current PR in Hungarian in 600 copies. The English version was ready by 15th July 2017.
- 1000 pieces of flyer, size A/4, page 2, 2x folded - Ready and printed in Hungarian in 600 copies. The English version was ready by 15th July 2017.

Brochures, flyers and maps are printed in 400 pcs each.

NAIK ERTI contributed to the activities by content development, translation and proof-reading of the English version of the project brochure, flyer and map.

Information materials were distributed on public information meetings, guided tours, national networking events, international visits.

Action E5	2013		2014				2015				2016				2017				2018			
	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																					
	actual																					

 planned in the modified proposal
 done

Action E6 Public information meetings

The activities of the action are *completed*. The action started on 24th October 2013 with the compilation of the invitations to the public information meeting.

The 1st public information meeting was held in Kaszó on 6th November 2013 with 15 participants. The invitations to the event were published in the local cable tv broadcasts and were installed at

the official information boards of the surrounding settlements. The information shared at the event included the introduction of the project activities besides the aims and objectives. The attendees were cooperative.

The 2nd public information meeting was implemented on 27th October 2015 together with a press conference. There were 15 people present at the event. Information was shared with locals and inhabitants from the surrounding settlements on the progress of the project activities, on the first results of monitoring (baseline survey).



The 3rd public information meeting was held on 14th November 2018. The number of participants was 26. Colleagues of KASZÓ and NAIK-ERTI introduced the project and its results and especially the impact of the project. Information was shared with locals and inhabitants from the surrounding settlements.

The status of deliverables, outputs and milestones is illustrated by the following table:

Action	Name	Delivery date		Comment
		Planned	Actual	
E.6	Report on the 1 st public information meeting	15/12/2013	07/12/2013	Done.
	Report on the 2 nd public information meeting	15/10/2015	28/10/2015	Done.
	First public information meeting held	30/11/2013	06/11/2013	Done.

The deliverables set for the reporting period is performed: the reports on the public information meetings were delivered. The milestone set for the action was also met: the first public information meeting was held (06.11.2013) within the deadline (30.11.2013).

Action	E6	2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																						
	actual																						

 planned in the modified proposal
 done

DISSEMINATION ANNEXES\Submitted with current 5 FINAL REPORT\Annex E6\

- Report documentation on 3. Public information meeting (14/11/2018)

Action E7 Guided excursion for the public

Altogether, 258 people participated at our officially organised events. The activities started with the preparation of T-shirts planned to distribute for participants. The invitation to produce the T-shirts was sent to three companies (Greller Gyula EV, Szakács Tünde EV and Info-Tech Digital Kft) in April 2016 and the contract with the winner (Greller Gyula EV) was signed on 18th April 2016. The 600 pieces of T-shirts were completed and delivered in May 2016 (one piece of the T-shirt is included as an Annex to Action E.7).

1st guided tour (59 participants): The invitation for the first guided tour was published in the surrounding municipalities, local teletex and a press release was sent to the media (Please refer

chapter 5.1.15 of this PR). The first excursion was held on 28th July 2016 on the new educational trail. Since 59 persons participated on the event, the first guided excursion was organised in two groups led by the experts of KASZÓ and NAIK-ERTI. During the excursion, besides the values of the project area, the forests and species, the forester's profession, the LIFE programme, the project, the results of the conservation actions was presented. (For the Minutes and Attendance sheets of the event please refer to Annex to Action E.7.) There were press articles published and a short film shot (please refer to chapter 5.1.18 of the current PR).

2nd guided excursion (23 participants): The 2nd guided excursion was organised on 24th May 2017, the 25th Anniversary of the LIFE Programme. Scholars from the nearby municipality, Somogyszob were invited. Following the walk around of Lake Kűvölgy and of the informational trail, they were invited to taste the LIFE cake, prepared especially for celebrating the 25th Anniversary of the LIFE programme.

3rd guided excursion (37 participants): On 24th June 2017, as one of the field programs of the National Forestry Association's annual meeting, KASZÓ-LIFE has been presented to the participants including forestry experts from all over the country. KASZÓ introduced the lake system and the retention of watercourses. NAIK ERTI contributed to the event by introducing the monitoring system linked to the conservation actions and summarizing the actual results of the assessments. An article was published about this event in the Forest press.

4th guided excursion (47 participants): For the Nagykanizsa Local Group of the National Forestry Association, KASZÓ organised a separated guided excursion on 1st October 2017. The lake system, the retention of watercourses and the monitoring system was introduced to them as well.

5th guided excursion (31 participants): On 12th June 2018, our project activities were introduced to the financial directors of the national forestry companies.

6th guided excursion (26 participants): Forestry Department of the Baranya County Governmental Office were given an insight to our activities on 15th June 2018.

7th guided tour (23 participants): the participants of the "Forestry camp" of KASZÓ visited the educational trail where our colleagues introduced them the project and its results. The event took place on 9th August 2018.

8th guided tour (13 participants): On 12th October 2018, the Forestry Water Management Unit of the National Forestry Association were present at the 8th tour, where we introduced them the Lake of Bűkk, a bottom-threshold in operation the Lakes of Kűvölgy and 3 monitoring parcels, where they could study the groundwater level.

All events were carried out successfully; participants were highly interested in our developments. The organisers received several questions from the visitors.

Action E7	2013		2014				2015				2016				2017				2018			
	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																					
	actual																					

■ planned in the modified proposal

 done

DISSEMINATION ANNEXES\Submitted with current 5_FINAL REPORT\Annex E7\



- Report on 7th guided tour (7. vezetett túra)
- Report on 8th guided tour (8. vezetett túra)

Action E8 Publishing layman's report

The activities of the action have *are completed*.

After a basic research in checking similar documents of other LIFE projects, our colleagues compiled the Layman's report. Following its English translation, the editing and printing was subcontracted through a three bid procedure. Reklámpark Ltd. was entitle to carry out editing and printing of the report. 250 Hungarian and 250 English versions were published. Layman's reports will be distributed at various local, regional, national and international workshops, seminars and conferences, study visits and other networking events, targeting forestry, nature protection professionals, decision makers. Copies will be placed at the premises of the two beneficiaries too.

Action E8	2013		2014				2015				2016				2017				2018			
	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																					
	actual																					

 planned in the modified proposal
 done



DISSEMINATION ANNEXES\Submitted with current 5_FINAL REPORT\Annex E6\

- Layman's report in English (Layman's report - EN.pdf)
- Layman's report in Hungarian (Layman's report - HU.pdf)

Action E9 Post project communication plan

The activities of the action have *are completed*. After a basic research in checking similar documents of other LIFE projects, the post project communication plan was elaborated in the last quarter of 2018. The plan consists of the short description of the project and the communication activities of the post project period.

Action E9	2013		2014				2015				2016				2017				2018			
	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																					
	actual																					

 planned in the modified proposal
 done

DISSEMINATION ANNEXES\Submitted with current 5_FINAL REPORT\Annex E9\

- After-LIFE Communication plan – English (KASZÓ-LIFE Plan for post-project communication.pdf)

- After-LIFE Communication plan - Hungarian (KASZÓ-LIFE Projekt utáni kommunikációs terv.pdf)

Action E10 International conference

The activities of the action are *completed*.

On 29-30 May 2018, the Water in Forests was organised within the frame of our LIFE project. Participants arrived from 5 countries: Poland, Slovakia, Croatia, Serbia and Hungary. The 53 participants represented forestry, nature protection and water management professions.

The registration went through an online form (<http://conference.kaszo-life.hu/> and <http://conference.kaszo-life.hu/locale/en>), where the presenters and participants could register themselves and their special requests.

Most of the visitors arrived already on 28th May 2018. Following their registration and welcome, friendly talks took place.

On 29th May 2018, following the welcome speeches of the directors, there were presentations held on climate change, on the role of water management in forestry areas and then the colleagues of KASZÓ introduced the KASZÓ-LIFE project in detail. In the afternoon session, we took the participants to a field visit, where the activities were presented directly.

During the evening hours, we organised a wine tasting where the participants could continue their talks.

The second day of the conference, water and forestry related projects were presented to the audience.

Translation was provided by a professional translation team throughout the whole conference (even during the field visit), ensuring a proper understanding of the topics for all.

KASZÓ was the main organiser of the event. NAIK ERTI contributed to the actions by cooperating in organization tasks and in promotion of the event, by contracting translators, technical staff for simultaneous interpretation and sound technicians. NAIK staff took part in the introduction of the project and its results by 3 conference presentations and 2 posters, as well as during the field trip.



The abstracts of the conference presentations have been collected and edited, the book of abstracts is to be published and disseminated until October 2018.

The presentations can be downloaded from our project website:

<http://kaszo-life.hu/hu/nemzetkozi-konferencia/eloadasok>

<http://kaszo-life.hu/en/international-conference/presentations>

Action E10		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																						
	actual																						

 planned in the modified proposal
 done

Action F4 Networking with other LIFE and/or non-LIFE projects

The first contacts with LIFE+ projects were done by the participation of KASZÓ's expert in a conference held in the framework of project HUTURJAN (LIFE10 NAT/HU/000020) on 14-15th October 2013. Presentations on the experiences of the elimination of invasive species

were useful and information gained is also used in the course of action C8 of project KASZÓ-LIFE.

The beneficiaries participated in the following further networking events:

- On 24th June 2014, the representative of KASZÓ participated in an on-site visit in Hajdúhadház as potential associated beneficiary of a future LIFE initiation
- The 12th Nature Protection Seminar (XII. Természetvédelmi Szeminárium) was held in Túrkeve on 24-26th March 2015, both beneficiaries participated. The representative of KASZÓ presented project KASZÓ-LIFE in the LIFE section of the event.
- Both beneficiaries participated in the event organised in the framework of project REDFOOT (LIFE11/NAT/HU/000926) in Tarnaszentmiklós on 24th April 2015. Valuable experiences were gained on the organisation of an international event, the creation of educational trails. Contacts with other LIFE initiations were also made.
- The initiator of project LIFE FLUVIAL (submitted to the 2015 call) contacted the project to start negotiations on possible future networking and cooperation. KASZÓ agreed with the objectives of the project proposal and provided their letter of support.
- Beneficiaries established contacts with several similar initiations either by direct contacts (i.e. proposed project LIFE FLUVIAL), or by participating in events organised by other relevant organisations. Project KASZÓ-LIFE was presented at almost all events.
- The project and the beneficiaries were presented in the partner search database created in the framework of the LIFE Capacity Building Tender in Hungary, LIFE14/CAP/HU000010 project. KASZÓ sent a declaration of support to proposed project LIFE FLUVIAL.
- Besides several LIFE trainings, professional forums and other networking events, KASZÓ issued a letter of support to the LIFE proposal of Mecsekerdő Zrt. and held presentations on KASZÓ-LIFE project to other project beneficiaries and other interested parties.
- NAIK ERTI experts contacted the LIFEGENMON (LIFE for European Forest Genetic Monitoring System, LIFE13 ENV/SI/000148) project in order to exchange experiences and ideas on general project management issues, on dissemination methods and achievements with special focus on the policy interface and on planning post project activities. The visit was linked to a field trip to one of the Slovenian monitoring plots of LIFEGENMON and took place in 21. August 2018.
- On 6th November 2018, KASZÓ participated in the final conference of project LIFEin FORESTS After establishing contacts with a Spanish LIFE project, the partners visited LIFE Alnus in the beginning of December 2018. The project was introduced through presentations then our hosts give us the opportunity to learn more about their initiation through a field trip.

The comprehensive list of networking events is summarised in the following table:



Date	Organiser/Project	Place	Subject	Participant	No of participants
14/10/2013 - 15/10/2013	HUTURJAN LIFE10 NAT/HU/000020	Bugyi (HU)	Experiences of the elimination of invasive species	KASZÓ	1 from KASZÓ Zrt, ~70 at the event
24/06/2014	Honvédelmi Minisztérium VGH és Hortobágyi Nemzeti Park	Hajdúhadház (HU)	Potential of a future LIFE initiation	KASZÓ	1 from KASZÓ Zrt, 9 at the event
24/03/2015	Nimfea	Túrkeve (HU)	12 th Nature	KASZÓ,	1 from

- 26/03/2015	Természetvédelmi Egyesület LIFE10 NAT/HU/000018		Protection Seminar	NAIK ERTI	KASZÓ Zrt, 2 from NAIK ERTI, ~70 at the event
24/04/2015	REDFOOT (LIFE11/NAT/HU/0 00926)	Tarnaszentmi klós (HU)	REDFOOT project presentation, “Kihajtási ünnep”	KASZÓ, NAIK ERTI	1 from KASZÓ Zrt, 1 from NAIK ERTI, ~80 at the event
18/06/2015	Nemzeti Fejlesztési Minisztérium	Budapest	LIFE Information day	KASZÓ	1 from KASZÓ Zrt, ~50 at the event
21/09/2015	LIFE FLUVIAL	Kaszó (HU)	Letter of support to other LIFE proposal	KASZÓ	N.A
31/03/2016	Magyar Fejlesztési Központ	Pilisszentkere szt (HU)	knowledge sharing workshop for LIFE beneficiaries	KASZÓ and the Project Coordinator	1 from KASZÓ Zrt, 1 from the Project Coordinator, ~30 at the event
19/04/2016 - 21/04/2016	LIFE Turjánvidék	Budapest (HU)	invasive species management	KASZÓ	2 from KASZÓ Zrt, ~50 at the event
28/04/2016	LIFEinFORESTS	Kardosfa (HU)	roundtable meeting on Natura 2000 sites	KASZÓ	3 from KASZÓ Zrt, ~50 at the event
08/09/2016	LIFE FLUVIAL	Kaszó (HU)	Letter of support to other LIFE proposal	KASZÓ	N.A
13/09/2016 - 15/09/2016	LIFE+ Ausseerland	Bad Aussee (AT)	wetland project site visit (first international visit)	KASZÓ	6 from KASZÓ Zrt, 1 from LIFE+ Ausseerland
20/03/2017 - 22/03/2017	LIFEinFORESTS	Sopron (HU)	sustainable forest management	KASZO	2 from KASZÓ Zrt, ~100 at the event
21/03/2017	Ministry of Agriculture	Budapest (HU)	Forest and Water (Erdő és Víz)	NAIK- ERTI*	1 from NAIK ERTI, ~60 at the event
23/03/2017	Országos Erdészeti Egyesület	Szombathely (HU)	Climate change, forests and the	NAIK- ERTI*	1 from NAIK ERTI, ~40 at the

			KASZÓ-LIFE project as good example		event
08/06/2017	LIFE Kapacitásépítés LIFE14 CAP/HU/000010	Pilisszentkereszti (HU)	Information day on LIFE programme (LIFE Infonap)	KASZÓ	2 from KASZÓ Zrt, ~78 at the event
31/08/2017	KASZÓ	Kaszó (HU)	Networking, knowledge sharing	Oakeylife projekt LIFE16 NAT/HU/000599	2 from KASZÓ Zrt, 2 from KEFAG Zrt.
07/09/2017	Mecsekerdő Zrt.	Kaszó (HU)	Letter of support to other LIFE proposal	KASZÓ	N.A
24/10/2017	Agrárklíma 2. - VKSZ_12-1-2013-0034	Sopron (HU)	Climate change, decision-making system	KASZÓ	2 from KASZÓ Zrt, ~20 at the event
20/02/2018	LIFE Kapacitásépítés LIFE14 CAP/HU/000010	Kecskemét (HU)	Training according to needs of applicants (Pályázói igények szerinti tréning)	KASZÓ	2 from KASZÓ Zrt, ~38 at the event
19/03/2018	Oakeylife projekt LIFE16 NAT/HU/000599	Kecskemét (HU)	Knowledge sharing on practical issues with special focus on elimination of invasive species	KASZÓ	1 from KASZÓ Zrt, 2 from KEFAG Zrt.
28/03/2018 - 29/03/2018	Oakeylife projekt LIFE16 NAT/HU/000599	Kecskemét (HU)	Opening conference, presentation of KASZÓ-LIFE project	KASZÓ	2 from KASZÓ Zrt, ~33 at the event
10/05/2018	LIFE Kapacitásépítés LIFE14 CAP/HU/000010	Pilisszentkereszti (HU)	Information day on LIFE programme (LIFE Infonap)	KASZÓ	2 from KASZÓ Zrt, ~78 at the event
15/05/2018	LIFE Kapacitásépítés LIFE14 CAP/HU/000010	Budapest (HU)	LIFE Nature protection training (LIFE Természetvédelmi tréning)	KASZÓ	2 from KASZÓ Zrt, ~80 at the event
06/11/2018	LIFEin FORESTS LIFE13 INF/HU/001163	Budapest (HU)	Final conference	KASZÓ	1 from KASZÓ Zrt, ~60 at the event

03/12/2018 - 06/12/2018	LIFE Alnus LIFE16 NAT/ES/000768	Mannlleu (ES)	International networking	KASZÓ, NAIK ERTI	4 from KASZÓ Zrt, 2 from NAIK ERTI, 3 from LIFE Alnus
21/08/2018	LIFEGENMON, Slovenian Forest Institute	Dvor (SI)	Visit and field excursion, information exchange on forest genetic monitoring systems	ERTI	2 from NAIK ERTI, 5 from LIFEGENM ON
26- 28/09/2018	Ponidzie LIFE	Busko-Zdrój (PL)	Conference, field trip and podium conversation	ERTI	4 from NAIK ERTI, ~65 at the event
03/10/2018	Hungarian Academy of Sciences, OAKEYLIFE	Kunpeszér (HU)	Information day on OAKEYLIFE	ERTI	11 from NAIK ERTI, ~60 at the event

Action F4		2013		2014				2015				2016				2017				2018			
		III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	planned																						
	actual																						

 planned in the modified proposal
 done

DISSEMINATION ANNEXES\Submitted with current 5_FINAL REPORT\Annex F4\

- Visit report: 06.11.2018 LIFEinFORESTS Zárókonferencia
- International visit report: 04.12.2018 LIFE Alnus

5.3 Evaluation of Project Implementation

As a summary of the project implementation the Partnership declares that the project objectives and aims were achieved within the timeframe set in the amended project proposal – with some smaller deviations – and no further project implementation prolongation requests were to be submitted. All deliverables set in the project proposal are provided.

During the project implementation the applied methodologies included both traditional and innovative procedures.

The project as a best practice project served as a demonstration project as well.

KASZÓ-LIFE put into practice, tested and evaluated the conservation actions by using a methodology and applying a dissemination/communication method which can be regarded as new in Hungary regarding the use of the former military fields. Not only from geographical aspects (new approach in Hungary) but also from ecological view (use of environment-friendly

methodologies, fostering and enhancing natural recovery and restoration processes) our project had several novum in its characteristics. KASZÓ-LIFE had a higher added value and as such its dissemination took place on a national and transnational level, rather than on a local scale.

Methodologies applied:

One step ahead at the preparatory phase:

At the preparatory phase of our project development - before the submission of the project proposal - KASZO has ordered the preparation of a pre-technical study documentation in order to be able to give estimations on the foreseen conservation actions. Preliminary field surveillance was carried out, where our planners collected data regarding the proposed conservations actions. Based on these, they were able to give estimations for the actual work needed and the budget belonging to the actions. Taking this extra step and additional investment in our concept enabled the Partnership to save time at the starting phase of the project. Since the permission procedures consumed our buffer-time and even caused a delayed start of the conservation actions, this precaution proved to be very beneficial. Also, the previously estimated budget hadn't showed big deviations during the project implementation, so major, large scale adjustments exceeding the budget flexibility were not necessary. Without this preparatory activity, our project could have faced more difficult challenges. When promoting our project concept, we are emphasising the necessity of the preparation of pre-technical studies.

Natural water retention:

After planning and communicating the aims of the project (A1-4) beneficiaries had the support (incl. permissions) to start the conservation actions. The common objective of these actions (C.1-6) was the "as-long-time-possible" retention of precipitation in the project area. This was achieved through the reservoir creation at the forest of Bükk, the conservation of Lake Baláta, the elimination of alluvion and enlargement of Kűvölgy Lake system and the retention of watercourses. In order to ensure the best access to the area, service roads were reconstructed as well (C7).

Although concrete technical actions were performed pointwise, the project affected more than 2100 ha. The objective of the project was to retain the available water-quantities and to increase the level of underground water by 10-20 cm – which then results in favourable ecological impacts. The water supply of swamps and narrow forests along watercourses became stable, maintaining and conservation of wet habitats will be easier on the long run. The suppression of invasives will be supported by the better and frequent water supply of habitats and stabilising the natural state. As a result of our activities, the process of decreasing groundwater level was slowed down on the entire project area (2100 ha). The proportion of 91E0 habitat – which entirely benefits directly from the project – is appr. 12 % (~260 ha). Apart from the priority habitat 3160 and 7140 will also benefit from the actions. 91L0 and 91M0 will benefit directly too.

Clearing off invasives:

Commonly applied, traditional practices which have proven to be the most efficient were implemented for forestry operations such as clearing off unwanted vegetation (e.g. invasive species). A combination of mechanical (e.g. cutting, mulching), chemical (e.g. exterminators) and biological (raised water level) methods were applied for the most sustainable suppression of the invasive species that degraded important habitats. The methodologies applied followed the

specific recommendations regarding handling of biological invasions published by the Hungarian State Secretariat for Nature and Environment Protection (Research Reports of the Hungarian State Secretariat for Nature and Environment Protection, Vol. 8-9, in Hungarian). In the course of suppressing invasive species, best practices collected by the associated beneficiary, ERTI, were applied also. These methodologies were also environment friendly and workers had a briefing/training on the way of applying either manual weed removal and then weed control. In cases manual weed control proved to be not sufficient, chemical treatment was applied. NAIK-ERTI supervised the total process and advised on the proper use of such treatment (Action C.8).

Suppressing invasives (C8) provided the opportunity to enlarge the ground surface covered by Alluvial forests.

4 pillar monitoring system:

Taking into consideration that the monitoring period – compared to the time-span of succession – is infinitesimally short, the demonstration of the effects of the conservation actions had several uncertainties. (E.g.: in case the monitoring base period is extremely wet, and the coming years are extremely dry, even though the actions were successful and provided a solution for the problem, the monitoring indicators will show a false result.) To overcome this methodological problem - when creating our monitoring system - we put a special emphasis on the directly measurable environmental elements, and we were also focusing on the measurement of the health conditions of the species of the priority habitats, since these are directly affected by the level of water supply.

On the territory of KASZO there were results of such monitoring actions available since 2001 (in other areas than the project area). The results of our similar monitoring system were comparable to the before mentioned data, therefore the monitoring of the results of the present project was adequate.

We had 14 monitoring parcels on the territory of the project and 4 control monitoring parcels outside the project area. Each monitoring parcel had a (2.) groundwater monitoring well, (3.) 100-100 labelled trees for health condition monitoring and (4.) 400-400 m² botanic quadrates.

Elements of our monitoring system:

1. *Automated agrometeorological station* for the automated measurement and storage of temperature, air pressure, humidity, wind and precipitation data and for the monitoring of water traffic.
2. *Groundwater monitoring wells* for collecting data weekly on the level of groundwater.
3. *Health condition monitoring:* The monitoring on the changes in the health condition of the populations could only be elaborated by a clear, unambiguous methodology which had an objective basis. An international forest condition monitoring methodology, which is used in ERTI was serving this aim. This methodology was elaborated by the Member States of the European Union in the mid '80s. In Hungary, this commonly accepted methodology is used since 1989. (The detailed methodology can be found on this website: www.icp-forests.org.)

The definition of the health conditions of the trees provided basic information on the changes in the forest ecosystem. The symptoms that could be found on the crown, trunk and root are characteristic indicators of the quality of the environment. The main aim here was to continuously collect data on the health conditions of the forests. During this survey, quantity and quality data on damages and symptoms could be identified. Based on a frequent, longer term survey, the direction and scale of changes in health conditions could be monitored.

On the sample parcels, we were assigning 100-100 sample trees for monitoring purposes. We were collecting detailed data on their health conditions twice a year. Firstly in the first part of

June, when the presence of pest (of spring and early summer) could be easily identified. The second data collection was at the end of August, beginning of September. Based on the summarized data, the health condition of the given population could be perfectly described.

During the course of the two yearly monitoring occasions, all sample trees of all parcels were monitored. During the data collection we were defining the quality of crown, trunk and root taking into consideration 123 parameters. Besides we were defining abiotic damages and – if possible – we were identifying the pest species settled on the individual trees, the occurrence of this pests and the damages caused by them. Based on these periodic data, we were analysing the changes in the parcels.

An additional methodology to be applied was the tree ring analysis.

4. Botanic surveys: In order to monitor the succession processes, one-one 400m² parcels were assigned on the project area. Within this botanic quadrat, twice a year – springtime and summertime – we were carrying out coenological survey according to ICP Forests methodology.

During the monitoring period, by analysing the changes in the texture of the vegetation and the changes in the water supply, we could forecast longer term effects of the concrete conservation actions on Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae).

In order to best perform monitoring activities, there were 14 plots where 100-100 sample trees (*Alnus glutinosa*) were determined. The state of the trees was examined twice a year. Besides the traditional health monitoring methods, the tree ring analysis was also applied.

Communication, dissemination:

In order to achieve the best acceptance of our project, the public was involved from the beginning (A4) and contacted through an active project website (E.1) also. Natural protection areas previously closed to the public were opened for the general audience as an educational trail was set up (E.3) and guided tours were organised (E7). Communication actions included setting up information and notice boards to describe the natural values of the area and rules for their protection (E.2). Publication of informative materials on the project (E.5), press conferences, press releases (E4) and public information meetings (E6) served as direct connection to the public. Networking and exchange experience with other projects' beneficiaries (F.4) served as a tool for disseminating the project and multiplying its effect by encouraging stakeholders and interested parties for carrying out similar activities.

Another notable approach that was applied and may serve as best practice is organising meetings and trainings for the beneficiaries' staff (Action F.3). This action aimed at sharing information and thus motivating all involved staff for the best performance. The training material included all relevant information of the project, the applied methodology and its practical information, and was developed jointly by the beneficiaries. What so more, families (children) of the beneficiaries' staff members were invited to a guided tour (E7). This further deepened their commitment to our project.

We organised a very successful international conference hosting colleagues from 5 countries: Poland, Slovakia, Croatia, Serbia and Hungary. The 53 participants represented forestry, nature protection and water management professions. The high number of participants was due to the long organising process: the conference was advertised well-before, a year ahead of the actual event took place. This allowed fellow colleagues to securely plan their participation. Also, their accommodation costs were financed through the LIFE Program, making their participation easier this way.

Deliverables and milestones:

Comparing the results achieved against the objectives, the following table was compiled (next pages). It contains deliverables and milestones the project actions.

Achieved deliverables, milestones and results are marked with: “✓”

Partly achieved deliverables, milestones and results are marked with: ~

Not achieved deliverables, milestones and results are marked with: ✕

Overaccomplished deliverables, milestones and results are marked with: 👉✓

Task	Deliverables and Milestones foreseen in the proposal	Evaluation, comments, other
A.1	✓ Milestone: 1 procurement expert selected and contracted 15/09/2013	Done.
A.1	✓ Milestone: Contract signed for Technical planning (action A.2) 15/11/2013	Done.
A.1	✓ Milestone: Contract signed for action F.1 15/11/2013	Done.
A.1	✓ Milestone: Contract signed for Construction works (actions C.1-C.4) 15/09/2014	Done.
A.1	✓ Milestone: Procurement procedures finished 15/11/2014	Done.
A.2	✓ Milestone: Technical plans completed 15/06/2014	Done.
A.3	✓ Milestone: Obtaining environmental permission 31/07/2014	Done.
A.3	✓ Milestone: Operating licences for Kűvölgy #1 and #2 extended 31/03/2015	Done.
A.4	👉✓ Deliverable: Memo of 15 occasions /stakeholder consultation 31/12/2014	Overachieved: 21 sh consultations were held
A.4	✓ Milestone: 1st stakeholder consultation held 31/12/2013	Done.
C.1	✓ Milestone: Water reservoir created 31/12/2014	Done.
C.2	✓ Milestone: By-pass built 31/12/2014	Done.
C.3	✗ Milestone: Lake Kűvölgy #1 dredged 31/03/2014	As per the detailed geodesic survey Lake Kűvölgy #1 cannot be dredged, the alluvion was eliminated only from Lake Kűvölgy #2. The planned amounts were moved, both lakes were restored properly. The mud was exploited and used for dams and for the reconstruction of service roads as planned.
C.3	✓ Milestone: Lake Kűvölgy #2 dredged 31/03/2014	Done.
C.4	✓ Milestone: Valley-closing barrage of Kűvölgy #3 built 31/12/2014	Done.
C.5	✓ Deliverable: 5 wild alarms installed 30/06/2018	Done.
C.5	✓ Milestone: Valley-closing barrage of Kűvölgy #4 built 31/12/2014	Done.
C.6	✓ Milestone: First bottom threshold or step built 15/10/2014	Done.
C.6	✓ Milestone: 100 bottom thresholds or steps built 30/11/2014	Done.
C.6	~ Milestone: 230 bottom thresholds or steps built 31/12/2014	Altogether 123 bottom thresholds were installed by 31st January 2016. A mistake was made in the revised project proposal. The figure for bottom thresholds (230 pcs) were by mistake left unchanged in Action C.6 although the technical plans included 123 thresholds.)
C.7	👉✓ Milestone: Service roads reconstructed 31/12/2014	Overachieved: 7km (instead of 6km) roads were reconstructed.
C.8	✓ Milestone: IAS control started 01/02/2014	Done.
C.8	✓ Milestone: IAS cleared off 31/12/2014	Done.
C.8	✓ Milestone: IAS cleared off 31/12/2015	Done.
C.8	✓ Milestone: IAS cleared off 31/12/2016	Done.
C.8	✓ Milestone: IAS cleared off 31/12/2017	Done.
D.1	✓ Deliverable: Monitoring plan 31/10/2013	Done.
D.1	✓ Milestone: Elaboration of one monitoring plan 15/10/2013	Done.
D.1	✓ Milestone: Sample parcels and quadrates defined 15/11/2013	Done.
D.2	✓ Deliverable: Socio-economic impact study 31/08/2018	Done.
D.2	✓ Milestone: Socio-economic study ready 31/08/2018	Done.
D.3	✓ Deliverable: Detailed habitat analyses database 30/11/2018	Done.
D.3	✓ Deliverable: Digital habitat map 30/11/2018	Done.

Task	Deliverables and Milestones foreseen in the proposal	Evaluation, comments, other
E.1	✓ Milestone: Internet domains registered 15/09/2013	Done.
E.1	✓ Milestone: Website development contracted 15/09/2013	Done.
E.1	✓ Milestone: Website is in operation 15/01/2014	Done.
E.2	✓ Milestone: Notice boards and gates installed 31/12/2013	Done.
E.3	✓ Milestone: Educational trail ready 30/06/2016	Done.
E.4	👉 ✓ Deliverable: 3 general articles in national press 31/07/2015	Over accomplished: 4
E.4	~ Deliverable: 10 general articles in local press 31/12/2018	Not reached: 8
E.4	~ Deliverable: 10 specialised articles 31/12/2018	Not reached: 9
E.4	👉 ✓ Deliverable: 20 internet articles 31/12/2018	Over accomplished: 49
E.4	✓ Deliverable: 20 press releases 31/12/2018	Done: 20
E.4	👉 ✓ Deliverable: 3 TV news 31/12/2018	Over accomplished: 10
E.4	~ Deliverable: 3 radio news 31/12/2018	Not reached: 2
E.4	✓ Milestone: First press conference held 31/12/2013	Done.
E.5	✓ Deliverable: Brochures 30/09/2016	Done.
E.5	✓ Deliverable: Flyers 30/09/2016	Done.
E.5	✓ Deliverable: Maps 30/09/2016	Done.
E.5	✓ Milestone: Brochures published 30/09/2016	Done.
E.5	✓ Milestone: Flyers published 30/09/2016	Done.
E.5	✓ Milestone: Maps published 30/09/2016	Done.
E.6	✓ Deliverable: Report on the 1st public information meeting 15/12/2013	Done.
E.6	✓ Deliverable: Report on the 2nd public information meeting 15/10/2015	Done.
E.6	✓ Deliverable: Report on the 3rd public information meeting 31/12/2018	Done.
E.6	✓ Milestone: First public information meeting held 30/11/2013	Done.
E.7	✓ Deliverable: T-shirt 31/03/2016	Done.
E.7	✓ Deliverable: Report on the 1st guided excursion 15/07/2016	Done.
E.7	✓ Deliverable: Report on the 2nd guided excursion 15/07/2017	Done.
E.7	✓ Deliverable: Report on the 3rd guided excursion 15/07/2018	Done.
E.7	✓ Milestone: T-shirts ready 31/03/2016	Done.
E.7	✓ Milestone: First guided excursion held 30/06/2016	Done.
E.8	✓ Deliverable: Layman's report 31/12/2018	Done.
E.8	✓ Milestone: Layman's report published 31/12/2018	Done.
E.9	✓ Deliverable: Post project communication plan 31/12/2018	Done.
E.9	✓ Milestone: Post project communication plan ready 31/12/2018	Done.
E.10	✓ Deliverable: Report on the International conference 15/10/2018	Done.
E.10	✓ Milestone: International conference held 30/09/2018	Done.
F.1	✓ Deliverable: Contract with the project management company 15/11/2013	Done.
F.1	✓ Milestone: Public procurement procedure for project management company started 01/10/2013	Done.
F.1	✓ Milestone: Project management company contracted 15/11/2013	Done.
F.2	✓ Deliverable: Memorandum of 10 Steering Committee meetings 31/12/2018	Done.
F.2	✓ Milestone: First meeting of the Steering Committee held 31/12/2013	Done.
F.3	✓ Deliverable: Educational package 31/01/2014	Done.
F.3	✓ Deliverable: Training event administration report 31/01/2014	Done.
F.3	✓ Milestone: First training event held 31/12/2013	Done.
F.3	✓ Milestone: Last training event held 31/01/2014	Done.
F.4	✓ Deliverable: International visit reports 31/12/2018	Done.
F.4	✓ Deliverable: Presentations on national conferences, posters 31/12/2018	Done.
F.4	✓ Milestone: First international visit 30/06/2016	Done.
F.4	✓ Milestone: Project presented on a national conference 31/12/2018	Done.
F.5	✓ Deliverable: Standard audit report completed 31/12/2018	Done.
F.5	✓ Milestone: Financial audit completed 31/12/2018	Done.
F.6	✓ Deliverable: After-LIFE Conservation Plan 31/12/2018	Done.
F.7	✓ Milestone: Report on synergies in the inception report 31/05/2014	Done.

Results

Comparing the results achieved against the objectives, the following table was compiled (next pages). It contains results listed in the “Expected results” section of the project action details of the project proposal. Please note, that there are ‘results’ items that are listed in the previous ‘deliverables and milestones’ table too.

Achieved results are marked with: ✓

Partly achieved and results are marked with: ~

Not results are marked with: ✕

Overaccomplished deliverables, milestones and results are marked with: ✓👍

COMPARISON OF THE RESULTS ACHIEVED AGAINST THE OBJECTIVES

Task	Foreseen in the proposal	Achieved	Evaluation
Action A.1 Procurement procedures	✓ 1 procurement expert selected and contracted	KASZÓ contracted MKEB as the procurement expert providing service for both service and equipment related procurements.	The procurement expert performed the assigned activities in a good quality.
	✓ 5 procurement procedures carried out.	The planned services to be procured with the assistance of the procurement expert are done. Four service related procurements were carried out for: (i) project management, (ii) technical planning and surveillance, (iii) construction, (iv) transportation. Adding here the (v) procurement of the procurement expert makes the number of procurement procedures 5 in total.	There were no problems in the course of the procurement procedures (except the delays caused by the dragging permit procedures).
	4 contracts signed for: • ✓ Contract signed for Technical planning (action A.2) • ✓ Contract signed for Construction works (actions C.1-C.4) • ✓ Contract signed for action F.1 • ✓ Transportation (action C.2, C.7) ✓ Procurement procedures finished	All planned services to be procured with the assistance of the procurement expert are finished. Contracts are signed.	Works are carried out according to the contracts, there were no legal problems during the elaboration of preparatory and conservation actions.
	✓ Purchase of equipment.	All foreseen equipment was purchased.	Services are implemented and equipment are used as per planned. The purchasing of certain equipment and additional services (where no public procurement was necessary) are carried out in the frame of the conservation or dissemination action, where they were actually used.
Action A.2 Technical planning	✓ Five technical plans will be elaborated and ready for submission as annexes under the permission acquiring processes (please refer to action A.3).	Landscaping plans were elaborated as per foreseen in the proposal. Detailed technical plans and final construction drawings are available.	Plans are submitted for acquiring the permits

Task	Foreseen in the proposal	Achieved	Evaluation
	✓ Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) are benefitting from the technical planning process by having actions C.1-C.5 carefully planned.	Our plans proved to be carefully planned.	Elaboration of conservation actions achieved and contributed to the foreseen project results.
	✓ Cost effective action plans will be set up in order to carry out the activities set in actions C.1-C.5.	Our plans were not containing any extra or exaggerated costs.	Budgeting of the conservation actions were properly planned, our activities remained feasible.
A.3 Permit procedures	✓ Environmental permission from the authority to carry out the proposed conservation actions.	Environmental permission from the authority to carry out the proposed conservation actions is acquired. The environmental permission is non-appellable and legally binding from 9th June 2015.	The process of acquiring the necessary permission required more time than forecasted and it caused a delay in the start of the conservation actions. Nevertheless we got the permissions and with an amendment to our subsidy contract, we carried out the conservation actions too.
	✓ Operating licence extended for Lakes Kűvölgy #1 and #2.	Operating licence extended for Lakes Kűvölgy #1 and #2. v The operating licence for Lake Bűkk and Lakes Kűvölgy was received on 11th May 2016.	The process of acquiring the necessary licences required more time than forecasted and consumed more efforts than previously planned.
A.4 Stakeholder consultations	✎✓ 15 occasions for one-on-one stakeholder consultations.	Beneficiaries implemented altogether 21 stakeholder consultations with different groups (nature protection experts, local community, school groups, governmental officers, tourists, etc.)	Stakeholders were interested in the project topic, several questions were answered during the consultations. Emphasising the importance of water and wet habitats contributed to the awareness raising of the younger generation. Meetings with nature protection experts, locals or surrounding settlements ensured that all interests are considered during the project implementation
	✓ All targeted habitats (91E0, 7140, 3160) are benefitting from the process of the result of stakeholder consultations: constraints and risk regarding stakeholder activities are identified and eliminated.	With the representation of nature protection experts, stakeholder consultations guaranteed that all targeted habitats (91E0, 7140, 3160) are benefitting from the process: constraints and risk regarding stakeholder activities are identified and	Stakeholder consultations went smoothly, there were no major obstacles or parties that were opposing our activities. All stakeholder groups accepted and

Task	Foreseen in the proposal	Achieved	Evaluation
		eliminated.	agreed to our conservation efforts.
C.1 Reservoir in forest Bükk	☑ According to our estimations the volume of extra water made available at the project area as the result of the planned interventions is 1.258 m3 during the summer-semester (between 1st April and 31st August) each year. (Please see the attached documents: Estimated volume of extra water made available to the area)	The volume of extra water made available at the project area as the result of the interventions of this action exceeds the foreseen 1.258 m3 during the summer-semester (between 1st April and 31st August) each year.	The forecasted volume of extra water made available for the project area from this action is secured. The volume of the newly created reservoir is 1.900 m3.
	☑ 1 water reservoir created.	1 water reservoir created.	The water reservoir was created according to the plans and operates properly.
	☑ Groundwater level raised.	Groundwater level raised.	Although last years' draughts brought an overall decrease in the groundwater level (there was not enough precipitation), the difference in ground water level on the project area compared to control areas is +48,77 cm!
	☑ Water supply in dryer periods is ensured.	Water supply in dryer periods is ensured.	The works were carried out properly, the newly created reservoir ensures water supply for the dryer periods.
	☑ Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, <i>Alnion incanae</i> , <i>Salicion albae</i>) are benefitting from this conservation action: their water supply is ensured along the stream Darvas.	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, <i>Alnion incanae</i> , <i>Salicion albae</i>) are benefitting from this conservation action: their water supply is ensured along the stream Darvas.	The works were carried out properly, the newly created reservoir ensures water supply for the dryer periods.
	☑ Constraints and risk deriving from low ground water level and dry periods are lowered.	Constraints and risk deriving from low ground water level and dry periods are lowered.	Constraints and risk deriving from low ground water level and dry periods are lowered.

Task	Foreseen in the proposal	Achieved	Evaluation
C.2 Conservation of Lake Baláta	✓ 1 water-level control object built.	1 water-level control object built.	The water-level control object was built according to the plans
	✓ Water level raised in dryer periods.	Water level raised in dryer periods.	The water-level control object ensures the raised water level in dryer periods.
	✓ Habitat 7140 and 3160 and also Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, <i>Alnion incanae</i> , <i>Salicion albae</i>) are benefitting: their water supply is ensured around the Lake Baláta.	Habitat 7140 and 3160 and also Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, <i>Alnion incanae</i> , <i>Salicion albae</i>) are benefitting: their water supply is ensured around the Lake Baláta.	Our monitoring activities proved that habitat 7140 and 3160 and also Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, <i>Alnion incanae</i> , <i>Salicion albae</i>) are benefitting from this action.
	✓ Constraints and risk deriving dry periods are lowered.	Constraints and risk deriving dry periods are lowered.	Constraints and risk deriving dry periods are lowered.
C.3 Eliminating Alluvion of Lakes Kűvölgy #1 and #2	✓ The storage capacity for the retained water increases by appr. 10.421 m3.	The storage capacity for the retained water increased by appr. 10.421 m3.	As per the detailed geodesic survey Lake Kűvölgy #1 cannot be dredged, the alluvion was eliminated only from Lake Kűvölgy #2. The planned amounts were moved, both lakes were restored properly. The mud was exploited and used for dams and for the reconstruction of service roads as planned.
	✓ The two existing lakes of the Kűvölgy system will be restored.	The two existing lakes of the Kűvölgy system are restored.	
	✓ Some 10.421 m3 mud will be exploited and used for reconstructing or building dams, reconstructing service roads.	10.421 m3 mud was exploited and used for reconstructing or building dams, reconstructing service roads.	
C.4 Enlargement of Lakes Kűvölgy (Lake #3)	✓ 1 lake (Kűvölgy Lake #3) created.	1 lake (Kűvölgy Lake #3) created.	The lake was created according to the plans and operates properly.
	✓ Groundwater level raised in the downer section of Rinya of Taranya.	Groundwater level raised in the downer section of Rinya of Taranya.	Groundwater level raised in the downer section of Rinya of Taranya.

Task	Foreseen in the proposal	Achieved	Evaluation
	✓ Water supply in dryer periods is ensured.	Water supply in dryer periods is ensured.	The works were carried out properly, the newly created lake ensures water supply for the dryer periods.
	✓ Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) are benefitting from this conservation action: their water supply is ensured along the stream Darvas.	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) are benefitting from this conservation action: their water supply is ensured along the stream Darvas.	The works were carried out properly, the newly created lake ensures water supply for the dryer periods.
	✓ Constraints and risk deriving from low ground water level and dry periods are lowered.	Constraints and risk deriving from low ground water level and dry periods are lowered.	Constraints and risk deriving from low ground water level and dry periods are lowered.
C.5 Enlargement of Lakes Kűvölgy (Lake #4)	✓ 1 lake (Kűvölgy Lake #4) created.	1 lake (Kűvölgy Lake #4) created.	The lake was created according to the plans and operates properly.
	✓ Groundwater level raised in the downer section of Rinya of Taranya.	Groundwater level raised in the downer section of Rinya of Taranya.	Groundwater level raised in the downer section of Rinya of Taranya.
	✓ Water supply in dryer periods is ensured.	Water supply in dryer periods is ensured.	The works were carried out properly, the newly created lake ensures water supply for the dryer periods.
	✓ Removing chumps will increase the water reservoir capacity of Lake#4 by 5-10%. What so more, remaining underwater pits could serve as micro-habitats for various species.	Removing chumps increased the water reservoir capacity of Lake#4. The remaining underwater pits serve as micro-habitats for various species.	This activity was added with the 2nd amendment of the subsidy contract. Works were carried out under dry conditions, during the autumn months until 24th October 2018.
	✓ Wild alarm installation will protect the barrages of the lake from wild animals treading and rooting, thus securing the safe operation and decreasing the long term maintenance costs of the lake.	Wild alarm installation protects the barrages of the lake from wild animals treading and rooting, thus securing the safe operation and decreasing the long term maintenance costs of the lake.	Following the installation of the wild alarms, tredding significantly decreased on the dams, the wild alarms proved to be successful.
	✓ Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) are benefitting from this conservation action: their water supply is ensured along the stream	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) are benefitting from this conservation action: their water supply is ensured	The works were carried out properly, the newly created lake ensures water supply for the dryer periods.

Task	Foreseen in the proposal	Achieved	Evaluation
	Darvas.	along the stream Darvas.	
	✓ Constraints and risk deriving from low ground water level and dry periods are lowered.	Constraints and risk deriving from low ground water level and dry periods are lowered.	Constraints and risk deriving from low ground water level and dry periods are lowered.
C.6 Retention of watercourses	~ 230 bottom-thresholds installed along the 24,603 km long section of watercourses.	Altogether 123 bottom thresholds were installed by 31st January 2016.	A mistake was made in the revised project proposal. The figure for bottom thresholds (230 pcs) were by mistake left unchanged in Action C.6 although the technical plans included 123 thresholds.)
	✓ Groundwater level raised in the surrounding area of watercourses.	Groundwater level raised in the surrounding area of watercourses.	The works were carried out properly, the thresholds slow down the flow of water, holds back the water and ensures the raising of the groundwater level.
	✓ The flow of water is slowed down.	The flow of water is slowed down.	The works were carried out properly, the thresholds slow down the flow of water.
	✓ Water supply in dryer periods is ensured.	Water supply in dryer periods is ensured.	The works were carried out properly, the thresholds ensure water supply for the dryer periods.
	✓ Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) are benefitting from this conservation action: their water supply is ensured along the watercourses of the project area.	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) are benefitting from this conservation action: their water supply is ensured along the watercourses of the project area.	The works were carried out properly, the thresholds slow down the flow of water, holds back the water and ensures the raising of the groundwater level, thus benefiting the target habitats.
	✓ Constraints and risk deriving from low ground water level and dry periods are lowered.	Constraints and risk deriving from low ground water level and dry periods are lowered.	Constraints and risk deriving from low ground water level and dry periods are lowered.

Task	Foreseen in the proposal	Achieved	Evaluation
C.7 Reconstruction of service roads	<p>✓ Reconstruction of approximately 6 km long service road network.</p>	Reconstruction of approximately 7,45 km long service road network.	The mud dredged and dried out in the course of Action C.3 (please refer to Chapter 5.1.7 of the MTR) had been used during the reconstruction of the service roads in altogether 7.450 m
	<p>✓ Lower CO2 exhaust on the longer term (with machinery traffic and transportation of workers to the field is getting shorter and simpler).</p>	Lower CO2 exhaust on the longer term (with machinery traffic and transportation of workers to the field is getting shorter and simpler).	Without the reconstruction, the staff needs to find alternate routes, which would raise the CO2 emission during the project and in the post project period (maintaining the system).
	<p>✓ Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) are benefitting from this conservation action: their water supply is ensured along the watercourses of the project area.</p>	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) are benefitting from this conservation action: their water supply is ensured along the watercourses of the project area.	The effective road system supports the instalment and management of the water-government and monitoring system, and with this, it creates beneficial conditions for the conservation of the priority habitat
	<p>✓ Constraints and risk deriving from low ground water level and dry periods are lowered.</p>	Constraints and risk deriving from low ground water level and dry periods are lowered.	Constraints and risk deriving dry periods are lowered.
C.8 Suppression of invasive species	<p>✓ Invasives cleared off.</p>	Invasives are cleared off.	Overall effectiveness of invasive plant control activities has been screened by ERTI in November 2018. Presence and condition of <i>A. negundo</i> , <i>A. altissima</i> , <i>P. serotina</i> and <i>R. pseudoacacia</i> have been assessed in temporary plots (5x5 m, 4 plots/ha) placed randomly in the affected forest subcompartments. Number of invasive plants with at least one intact shoot older than the years spent since the last treatment has been recorded. Additionally,
	<p>✓ Conservation of the natural condition of Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) and prevention of the invasion <i>Solidago</i> and <i>Aster</i> species and <i>Prunus serotina</i> will be achieved.</p>	Conservation of the natural condition of Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) and prevention of the invasion <i>Solidago</i> and <i>Aster</i> species and <i>Prunus serotina</i> is achieved.	
	<p>✓ Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) will recover on approximately 5-10 % of the project area.</p>	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) will recover on approximately 5-10 % of the project area.	

Task	Foreseen in the proposal	Achieved	Evaluation
	✓ Recurring of the invasive species will be prevented.	Recurring of the invasive species is prevented.	actual or potential (3+ years old) seed producing specimens have been counted in the whole area of the subcompartments. The results show proper quality invasive plant control with an average of less than 7 intact shoots per hectar and none or negligible amount of potentially flowering trees remaining. Summing up: invasives are cleared off, recurring of the invasives is prevented. It supports the future recovery of our target habitat on appr. 5-10% of the project area.
D.1 Monitoring of the impact of project actions on priority habitats	✓ Elaboration of a monitoring plan.	Monitoring plan was elaborated.	The monitoring system operated properly, we've managed to set up procedures that could measure the impacts of our Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) conservation and rehabilitation actions.
	✎✓ Assignment of 14 sample parcels with 100 individual trees each and one-one 400m2 botanic quadrates.	Assignment of 18 sample parcels with 100 individual trees each and one-one 400m2 botanic quadrates. (14 parcels within the project area, 4 control parcels outside of the project area.)	
	✓ Installing a meteorological monitoring station.	Meteorological monitoring station installed.	
	✓ Installation of service water level monitoring equipment.	Service water level monitoring equipment installed.	
	✓ Installation of groundwater level monitoring wells.	Groundwater level monitoring wells are installed.	
	✓ Impact of Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) rehabilitation action will become measurable (area extent of restored habitats).	Impact of Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) rehabilitation action became measurable (area extent of restored	

Task	Foreseen in the proposal	Achieved	Evaluation
		habitats).	
D.2 Assessment of the socio-economic impact of the project actions on the local economy and population as well as on the ecosystem functions	✓ 1 assessment study of the socio-economic impact of the project actions on the local economy and population as well as on the ecosystem functions.	1 assessment study of the socio-economic impact of the project actions on the local economy and population as well as on the ecosystem functions.	The document was finalised until the end of the project.
	✓ Knowledge of our key stakeholders on the project results increased.	Knowledge of our key stakeholders on the project results increased.	101 people were asked to fill in a questionnaire during the elaboration of the study. Findings of our study will be presented to our key stakeholders during our post project communication activities (conferences, study visits, etc.), to enable them to evaluate our project from different aspects.
D.3 Detailed habitat mapping	✓ Detailed habitat specific data from 70-100 sampling spots, based on local surveys and laboratory examination (soil type, soil physical properties, mechanical composition, humic substances, lime content, acidity, chemical characteristics, etc.).	Detailed habitat specific data from 73 sampling spots, based on local surveys and laboratory examination (soil type, soil physical properties, mechanical composition, humic substances, lime content, acidity, chemical characteristics, etc.).	The action was carried out properly, foreseen results are achieved.
	✓ Digital habitat map for the whole project area (based on data deriving from the habitat exploration, adapted to the terrain surface model).	Digital habitat map for the whole project area (based on data deriving from the habitat exploration, adapted to the terrain surface model).	
	✓ Hydrological model adapted to the habitat map.	Hydrological model adapted to the habitat map.	
E.1 Online Communication	✓ Internet domain name will be registered and project documents will be available.	Internet domain name is registered and project documents are available online.	A visual id was prepared for our project in the frame of this action. The website our project operated properly, content, news were frequently updated. The international conference was advertised through this tool too.
	✓ Project website will be registered in the LIFE+ project databank.	Project website is registered in the LIFE+ project databank.	



Task	Foreseen in the proposal	Achieved	Evaluation
	✓ 6 newsletters throughout the lifetime of the project will be sent out.	6 newsletters throughout the lifetime of the project are sent out.	English and Hungarian versions of the newsletters were sent out to our mailing lists. We were in contact with 75 similar international LIFE projects. Interested stakeholders from Hungary were notified too: 76 colleagues (professionals) received our newsletters.
E.2 Installation of gates, informational and notice boards	✓ Installation of 20 notice boards and 8-10 gates.	Three pieces of information boards (size A1) and 17 pieces of notice boards (size A2) were installed at the main entryways to the project area. 8 gates were installed too.	Our colleagues had not met significant number of trespassers and illegal activity on the area.
E.3 Development of an educational trail	✓ 10 education boards prepared and set up in the project area serving as a tool for education for visitors of the site.	There are 10 small educational boards (A2 size) installed in the educational trail.	Visitors, interest groups organised outside of the KASZÓ-LIFE project are regularly using the educational trail.
E.4 Media work	✓ 3 press conferences will be held.	3 press conferences held.	We had not managed to reach the proposed number in the local press and radio, but the targeted number of internet and tv appearances were over accomplished. As the internet is getting more and more important while the role of radio and printed media decreases, we believe it is a very good result. Online media and online platforms of tvs further shared our news via Facebook and Youtube, so the message reached an even bigger audience.
	✓ Invitations to open events will be sent out to journalists.	Invitations to open events were sent out to journalists.	
	✓ 20 press releases.	20 press releases.	
	✎✓ 3 general articles in national press.	4 general articles in national press.	
	~ 10 general articles in local press.	8 general articles in local press.	

Task	Foreseen in the proposal	Achieved	Evaluation
	☑ 10 specialised articles.	11 specialised articles.	
	☑ 20 Internet articles.	49 Internet articles.	
	☑ 3 TV news.	10 TV news.	
	~ 3 radio news.	2 radio news.	
E.5 Publishing of informational material	✓ 1000 brochures will be printed and distributed to the public, NGOs and stakeholders outside the site.	600 Hungarian and 400 English version of the brochure was printed.	During the project, our information materials were distributed during our guided tours, national or international events held in Kaszó and our colleagues handed out these materials when visiting other projects (national and abroad) and interested stakeholders.
	✓ 1000 copies of flyers will be printed and distributed to the public, NGOs and stakeholders outside the site.	600 Hungarian and 400 English version of the flyer was printed.	
	✓ 1000 copies of maps will be printed and distributed to the public, NGOs and stakeholders outside the site.	600 Hungarian and 400 English version of the map was printed.	
E.6 Public information meetings	✓ 3 high-attended events will be organized which are expected to lead to an increase in public acceptance.	3 high-attended events will be organized which are expected to lead to an increase in public acceptance.	Altogether, we had 56 participants at our forums, that we consider a good results.
	✓ Informational material distributed in the local communities.	Informational material distributed in the local communities.	Information materials were distributed at our events.
	✓ Dialog with environmental NGOs and individuals will be initiated.	Dialog with environmental NGOs and individuals will be initiated.	Though a large number of environmental NGOs were not present at our public information meetings (there are not many local



Task	Foreseen in the proposal	Achieved	Evaluation
			environmental NGOs), we've managed to contact and start a dialog with such organisations during our other dissemination (eg.: E1, E4, E7, E10, etc.) and networking (F7) activities.
E.7 Guided excursions for the public	<ul style="list-style-type: none"> ✓ 3 guided excursions organised with at least 150 attendants. 	8 guided excursions organised with 258 attendants.	The action was over accomplished, we could perfectly use this dissemination tool combined with the newly created educational trail to introduce our project. Our visitors were happy to receive the T-shirt as a gift.
	<ul style="list-style-type: none"> ✓ 600 T-shirts manufactured. 150 for the organised 3 tours, 449 distributed among other visitor groups (schools, children, etc.) who are visiting our project area for a study visit. 1 T-shirt will be sent together with our report. 	600 T-shirts manufactured. They were distributed attendants of our guided excursions and among other visitor groups (schools, children, etc.) who are visiting our project area for a study visit. 1 T-shirt was sent together with our mid-term report.	
E.8 Publishing layman's report	<ul style="list-style-type: none"> ✓ 500 copies of Layman's report printed and distributed. 	500 copies of Layman's report printed started to be distributed and will be distributed at our various events in the headquarters of KASZÓ and NAIK-ERTI.	As the Layman's report were prepared at the closing phase of our project, the distribution of the 500 copies is not done yet. We will make this dissemination material available for our future visitors at our premises and the project area.
	<ul style="list-style-type: none"> ✓ Electronic version of report uploaded to project website. 	Electronic version of report uploaded to project website.	Done.
	<ul style="list-style-type: none"> ✓ Ultimately, increase in public awareness and acceptance. 	Ultimately, increase in public awareness and acceptance.	This dissemination material further increases public awareness and acceptance of our project concept.
E.9 Post project communication plan	<ul style="list-style-type: none"> ✓ Post project communication plan elaborated. 	Post project communication plan elaborated.	Done.
E.10 International conference	<ul style="list-style-type: none"> ✓ The measure of success for the project is its added value to environmental protection in the EU. Whereas traditional communication tools can raise general awareness and public acceptance the most 	The measure of success for the project is its added value to environmental protection in the EU. Whereas traditional communication tools can raise general awareness and public acceptance the	The international conference of the project was very successful: participants arrived from 5 countries: Poland, Slovakia, Croatia,

Task	Foreseen in the proposal	Achieved	Evaluation
	effective method for knowledge transfer to international environmental professionals and stakeholders is through interactive communication and on site demonstration based on strong professional bonds.	most effective method for knowledge transfer to international environmental professionals and stakeholders is through interactive communication and on site demonstration based on strong professional bonds.	Serbia and Hungary. The 53 participants (20 was planned) represented forestry, nature protection and water management professions. The representatives of the various professions started and maintained great formal and informal debates during our official indoor and site-visiting programmes and during our coffee-brakes, evening programmes too.
F.1 Project management and monitoring of project progress (administrative, technical and financial)	✓ Project achieves expected results in accordance with project time table.	Project achieves expected results in accordance with amended project time table.	The project achieved its results with a 4 months prolongation.
F.2 Steering Committee	✓ 10 scheduled Steering Group meetings held during project implementation.	11 scheduled Steering Group meetings held during project implementation.	SC operated properly and managed to arrive on a consensus in all questions.
	~ Unscheduled on-line meetings may be held should any urgent matter occur.	None.	All important matters were discussed on personal meetings.
	✓ Pre-evaluation of progress-, mid-term and final reports prepared by the project management will be carried out (action F.1.).	Pre-evaluation of progress-, mid-term and final reports prepared by the project management was carried out (action F.1.).	Reports were according to SC decisions.
	✓ The project will be accomplished successfully and in accordance with timetable.	The project was accomplished successfully and in accordance with amended timetable.	SC agreed on a 4 month prolongation of the project. Project is successfully accomplished.
F.3 Training, workshops and meetings for the project beneficiaries' staff	✎✓ 20 forestry personnel have received training on nature conservation issues on two seminars.	24 + 38 forestry personnel have received training on nature conservation issues on two seminars.	The training was successful. It also served to deepen the commitment of the colleagues of the forestry towards KASZÓ-LIFE.



Task	Foreseen in the proposal	Achieved	Evaluation
	✔ 20 copies of educational packages for environmental practices published.	65 copies of educational packages for environmental practices published.	All participants received a copy of the educational package.
F.4 Networking with other LIFE and/or non-LIFE projects	✔ Participation of 3-3 colleagues of KASZO and ERTI in 2 international visits per person.	6 and 4 colleagues of KASZÓ at 2 international visits (3 colleagues visited both places, 3 colleagues visited 1-1 places). 2, 2 and 4 colleagues of NAIK-ERTI at 3 international visits (1 colleagues visited all 3 places, 5 colleagues visited 1-1 places)	5 international visits were accomplished with the participation of 14 colleagues of the beneficiaries.
	✔ Representing our project and networking on national conferences, seminars and workshops.	Representing our project and networking on 24 national conferences, seminars and workshops.	Our project was widely disseminated by our visits on national events. Colleagues established good contacts with professionals. Lessons learned from our project was shared.
	✔ Scope of our travelling colleagues widened and opened towards transnational, cross-border collaboration opportunities.	Scope of our travelling colleagues widened and opened towards transnational, cross-border collaboration opportunities.	Towards the closure of our project, our colleagues were planning the submission of a new LIFE project. International collaboration opportunities were studied to search partners facing similar problems from the neighbouring countries.
F.5 External audit	✔ Standard Audit Report prepared.	Standard Audit Report prepared.	Standard Audit Report prepared according to the agreement.
F.6 After-LIFE Conservation Plan	✔ Study on project sustainability will be elaborated.	Study on project sustainability was elaborated.	The After-LIFE Conservation Plan, as a study and activity plan on project sustainability serves as a guideline for post project actions.
	✔ Sustainability of conservation measures will be achieved.	Sustainability of conservation measures will be achieved.	The post project activities will ensure the sustainability of our conservation actions.



Task	Foreseen in the proposal	Achieved	Evaluation
F.7 Potential synergy LIFE-EEOP	✓ The European Commission will be frequently informed the status and the progress of the EEOP proposals.	The European Commission was informed about the status and the progress of the EEOP proposals in our progress reports.	The works elements of the EEOP implementation project took place in forest parts that do not overlap, and fall outside the LIFE project area. The aim of both projects is to suppress invasives in the operation area of KASZÓ and prevent resprouting. The EEOP activities contributed to the increase of the naturalness of the forest and the improvement of the health status of the valuable tree stocks, simultaneously with the decrease of reinfection of the areas by invasives species.
	✓ Sinergy between the actions of the two instruments and the added value of the complementary actions to LIFE will be registered to achieve a higher benefit.	Sinergy between the actions of the two instruments and the added value of the complementary actions to LIFE was registered to achieve a higher benefit.	

5.4 Analysis of long-term benefits

In this section please discuss the following:

1. Environmental benefits
 - a. Direct / quantitative environmental benefits:
 - i. LIFE+ Nature and Biodiversity: e.g. conservation benefits for Natura 2000 (SCI/SPA) and species/habitat type targeted.

*Conservation benefits for Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*:*

The implementation of the conservation actions (Actions C.1, C.2, C.4, C.5, C.6, C.7 and C.8) resulted in very positive changes in the project area, which well base the long-term sustainability of the area and priority habitats and species of Community importance. For the restoration and conservation of Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* in the Kaszo area, beneficial conditions were created mainly by improving the water supply of the forests, smaller swamps and grasslands of Szentai Forest area (HUDD20063) as well as retaining precipitation in the area and thus stabilising the favourable ecological state.

In the vicinity of the actual conservation actions, the underground water level was raised by 40-50cm or with even a quantity. The water thresholds were not providing such a great number, but still, reached our expectations: after the conservation actions, in vegetation season, the average increase of the groundwater level was 24 cms. The increase of the groundwater level resulted in favourable ecological impacts: the water supply of swamps and narrow forests along watercourses became more stable, maintaining and conservation of wet habitats were made easier.

At the same time, talking about the whole KASZO-LIFE project area, the extreme draughts of the past years caused a severe decrease of the level of the underground water. Wells at the project area showed an average decrease from -63,26 cm to -107,81 cm. At the control parcels (outside of the project area, not affected by our conservation actions), the underground water level decreased from -170,19 cm to -263,51 cm. This shows that our conservation efforts lessen the decrease of the underground water level by an average of 48,77 cm, compared to the areas where there were no such efforts.

We can still consider this a great result: the extremely rapid decreasing of underground water level was slowed down on the entire project area (2100 ha). The proportion of 91E0 habitat – which entirely benefits directly from the project – is appr. 12 % (~260 ha). Apart from the priority habitat 3160 and 7140 will also benefited from the actions. 91L0 and 91M0 benefited directly too.

The territory of habitats dominated by invasive tree and shrub species had been cleared off in the project area. Elimination works of invasive plant species carried out in the course of Action C.8 are considered successful, but after-LIFE-treatments shall focus on the prevention of re-fertilization of the area. In total 287,93 hectares were cleared off, enabling priority species to reconquer the area in the future.

Detailed information on the effects of water retention measures for the benefit of priority habitats (according to the monitoring report):

Joint analysis of ground water level and meteorological data on calendar year basis has revealed slight but statistically significant change in the water supply of the project area

monitoring plots compared to the control plots. The results indicated that *the speed of ground water level decrease had been reduced due to the implemented water retention measures* (Eötvös – Horváth 2018). However, current precipitation is not sufficient for stabilizing the dropping ground water level.

Double mass curve analysis of cumulative ground water depth data, on hydrological year basis, with a break point coinciding the conservation actions, has demonstrated the benefits of the water retention measures in 10 monitoring plots. The effects were close to instant in the vicinity of the Kúvölgy Lakes. Comparative analysis of vegetation period ground water levels before and after the C actions has shown that *supplement of ground water is very effective within a radius of about 200 metres of the reservoirs with raised water level. Slowdown of the surface water runoff contributes to the water supply, but less effectively and temporally*. It appears only in short periods, usually in spring, when water supply is favourable anyway. In case the inventions are not executed, arid years result in 40-80 cm lower ground water levels.

Health status data analysis has revealed high level temporal variability between 2014 and 2018 in all cases (in oak and alder stands, in project and control monitoring plots). Overall leaf loss (LL) and branch dieback (BD) were identified as good descriptors for the health status of monitoring plot populations. Yearly average of LL was significantly lower in alder stands than in oak stands, 5-10% and 15-20%, respectively. Until autumn 2016, the average LL in project plots was higher than in control plots. This trend has changed in 2017. The same progression was observed in oak stand BD, while in case of alder plots, the BD was continuously higher in control plots. The causes and/or agents of LL and BD (abiotic damages, pathogen and herbivore insect pressure) are numerous and their impact had been varying yearly, seasonally and per tree species. In case of alder stands, leaf herbivory and storm damage were identified as dominant causes for LL. No exclusive cause/agent was found for project plots or control plots. Complex dieback symptom was found to be the primary factor behind LL and BD in oaks. Additionally, late winter and spring storms increased the LL and twig dieback rates; and late frost damage was observed in 2016. *In summary, progression in the health condition of monitoring plot alder and oak stands was observed simultaneously with the C actions.*

The same trend and timing was observed in the yearly increment data (Garamszegi et al. 2018). Originally, tree ring analysis had been included in the monitoring plan to overcome the difficulties caused by the exceptionally high precipitation of the baseline period. The results revealed stronger relationship of alder growth with climate, first of all, with summer rainfall and mean relative humidity, than in case of oak, even considering the generally higher groundwater level under the alder plots. During a series of years with severe droughts in the vegetation period, that had been selected on the basis of 6-month SPEI drought index and decrease in alder increments, the tree ring width analysis has shown that *the increment loss in project area plots was lower than in control plots following the conservation actions*, though a reverse tendency was general during all the previous drought periods.

Coenological surveys were included in the monitoring system in order to detect changes in the texture of vegetation resulted by water supply improvement. Although the species composition of ground level vegetation was expected to react at a much slower rate and on a longer scale than ground water level or health status parameters, initial changes had been observed already. In total, more than 220 vascular plants, including 10 protected species, was found in the ground layer of the botanical quadrates of the monitoring plots. The maximum of the total species per plot count for the period of 2014-2018 was 102 (no. 6, project area plot,

black alder), the minimum was 32 (no. 4, control plot, black alder). Generally, the highest per assay species number was observed in alder stands on relatively dry sites, while oak stands with hornbeam lower canopy held the weakest ground level vegetation. Typical alder stands on low sites (ground water level above ground level for 2+ weeks) had 75-90 species in total, and 50-60 per assay. Notable changes in these plots indicate the effects of the prolonged water cover and the improved water supply during the vegetation period. Although these factors may interfere, they result in slight improvement of species counts and dominant species number. In case of project area plot no.1 and 9, the long-lasting water cover decreased both the ground layer cover and the species count; and the onset of the tussock formation can be observed. The botanical surveys in the project area contributed 20 novel species occurrence data for the Atlas Florae Hungariae.

- i. *Highlight briefly issues that may have important policy implications on Natura 2000 also in relation to other EC policies if relevant (e.g. new management techniques and procedures, pump priming agri-environment, links with the water framework directive, etc). Please also address incentive/pump priming effects (both in financial and policy terms)*

The LIFE investment in our water retention measures was presented in several forums and conferences. Management bodies of forestries showed a high interest in carrying out similar activities in their areas.

- b. Relevance for environmentally significant issues or policy areas (e.g. industries/sectors with significant environmental impact, consistency with 6th or 7th (as applicable) EU Environment Action Programme and/or important environmental principles, relevance to the EU legislative framework (directives, policy development, etc.)

The 7th Environment Action Programme sets out the protection, conservation and enhancement of the Union's natural capital (priority objective 1 <Article 2 1.(a)>). Data and information gained during the basic status survey and the monitoring activities provide base for further evaluations this way contributing to the improvement of the knowledge and evidence base for Union environment policy (priority objective 5 <Article 2 1.(e)>). Our water retention measures contribute to combating climate change, corresponding to priority objective 9 (Article 2 (i)): to increase the Union's effectiveness in addressing international environmental and climate-related challenges. Sharing the results and achievements of the project by presenting them at scientific conferences and publishing in scientific periodicals contributes to the implementation of the 7th EAC.

2. Long-term benefits and sustainability
 - a. Long-term / qualitative environmental benefits

With the implemented water retention measures, we have managed to create favourable conditions that could possibly halt the degradation and stabilise the condition of the primarily targeted priority habitats, 91E0* (Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*), as well as habitats 3160, 7140 (only around Lake Baláta) and 91L0 and 91M0.

We have defined three threats at the beginning of our project. The basic threat to the project area is the decrease of the ground water level (threat 1), that was originated by three factors: a) decrease in total annual precipitation, b) past demolition of the natural water-ratining landforms and c) the forced drainage in order to avoid floods in case of heavy rain. With the drying out of the area, favourable conditions were created for Invasice Alien Species, which meant a threat (threat 2) to the Natura 2000 site. Deriving again from the lowering ground water level threat, the *Melolontha melolontha* infection rate was increasing, causing another threat (threat 3) to the targeted habitat.

With our conservation actions, we targeted and eliminated the negative effects of pervious human interventions (factors b) and c)). As with local measures we cannot influence the decrease in total annual precipitation, it still remains a factor (a) that - in case of extreme draughts (as it was in the past years) - could still originate the decrease of ground water level (threat 1) and deriving from this, causing threat 2 and 3.

Still, we can state, that for the medium run, we have eliminated the main threats to priority habitats. For the long run, we need to calculate with a decreasing total annual precipitation and to find new measures that could enable us to keep the water in our area and keep the ground water at a favourable level.

- b. Long-term / qualitative economic benefits (e.g. long-term cost savings and/or business opportunities with new technology etc., regional development, cost reductions or revenues in other sectors)

The long-term economic benefit of the forestry is that it could possibly maintain economically more valuable habitats, with good quality woodstock. Provided all other factors are constant, the profitability of the area could be maintained or by reversing the decrease of the ground water and eliminating other future threats, even increased.

Without our conservation actions, the status of our alders could have worsen in the coming years so, that they could have disappeared from the whole project area. 13% of the area is characterized by this habitat, which accounts to ~270 hectares. In case of drying out, the recovery of habitat could cost ~ 2.600 EUR / hectares. The total cost for the area could had been 718.750 EUR. With the elimination of invasives, we saved around 290 hectares of valuable habitats. Without the action, the later renovation of the forest could reach up to 750.000 EUR.

Besides, there are several other benefits of the actions that cannot be quantified: protection of rare and priority species and habitats, maintenance of the healthy environment for the support of people' physical and mental health. CO2 capture, O2 production, cleaning of air, etc.

- c. Long-term / qualitative social benefits (e.g. positive effects on employment, health, ethnic integration, equality and other socio-economic impact etc.)

As our forests provide several socio-economic and cultural benefits, maintaining their good status will contribute to the well-being of the neighbouring population. "Green spaces, especially forests, are good for human health. There is clear evidence that forests as a place for recreation and eco-tourism have positive effects on physical and mental health, especially in terms of prevention of many civilization diseases." (<https://foresteurope.org/social-cultural-benefits-forests-contributing-human-health-well/>) Accordingly, our habitats will develop the health condition of our visitors.

Our educational trail and other routes across the project area will serve as pedagogical tools, contributing to the education of future generations.

Stabil forestry management will be able to provide future employment for low skilled, underprivileged groups too. Ethnic integration of the neighbouring areas will be fostered also by providing them earning opportunities through direct employment (as staff) and through maintaining the possibility of private forest fruits and mushrooms collection.

- d. Continuation of the project actions by the beneficiary or by other stakeholders.

Regarding the achieved results, we are planning to maintain our infrastructure and continue the monitoring activities too. KASZÓ will provide its own funding for the frequent checking and necessary repairing of the water reservoirs and water retention thresholds along streams. Dredging of lakes will be carried out in order to maintain the water storage capacity of the lakes. Communication of project results will be achieved through distributing layman reports, networking events, maintenance of educational trail and our website. NAIK-ERTI will take care of future monitoring on the effects of our project, financing its post project activities from own fundings.

3. Replicability, demonstration, transferability, cooperation: Potential for technical and commercial application (transferability reproducibility, economic feasibility, limiting factors) including cost-effectiveness compared to other solutions, benefits for stakeholders, drivers and obstacles for transfer, if relevant: market conditions, pressure from the public, potential degree of geographical dispersion, specific target group information, high project visibility (eye-catchers), possibility in same and other sectors on local and EU level, etc.

Conservation actions implemented in the course of the project are completely replicable; results are transferable and might well support the implementation of conservation actions of other (similar) projects as well. Experiences gained through the elaboration of our activities were shared with the participants of several conferences and workshops – both implemented in the course of the project and organised by partners outside the partnership. A great interest was shown towards our initiation and we consider our initiation as a flagship project for introducing natural water retention measures in forests for the benefit of conservation and restoration of priority habitats.

Replicability plans: In the coming years, in the vicinity of the project area, KASZÓ is planning to involve new areas where we will carry out similar water retention measures. Preparatory activities of these actions have already started. The enlargement of the permanent and temporary water surfaces will have a very positive effect on the ground water level. Also, the evaporation of these water bodies will aid us to fight atmospheric droughts.

4. Best Practice lessons: briefly describe the best practice measures used and if any changes in the followed strategy could lead to possible adjustment of the best practices

3 measures for the increasing of ground water level:

- Increasing the capacities (volume and time span) of existing water reservoirs, lakes
- Creation of new water reservoirs
- Temporary water retention with bottom threshold on streams

All of them proved to be successfully implemented, the groundwater level showed a significant increase compared to the control areas without such conservation efforts.

4 pillar monitoring system:

Taking into consideration that the monitoring period – compared to the time-span of succession – is infinitesimally short, the demonstration of the effects of the conservation actions had several uncertainties. (E.g.: in case the monitoring base period is extremely wet, and the coming years are extremely dry, even though the actions were successful and provided a solution for the problem, the monitoring indicators will show a false result.) To overcome this methodological problem - when creating our monitoring system - we put a special emphasis on the directly measurable environmental elements, and we were also focusing on the measurement of the health conditions of the species of the priority habitats, since these are directly affected by the level of water supply.

Elements of our monitoring system:

- Automated agrometeorological station
- Groundwater monitoring wells
- Health condition monitoring
- Botanic surveys

More information on our monitoring system can be read in chapter 5.3.

5. Innovation and demonstration value: Describe the level of innovation, demonstration value added by EU funding at national and international level (including technology, processes, methods & tools, organisational & co-operational aspects);

Experiences gained through the elaboration of our activities were shared with the participants of several conferences and workshops – both implemented in the course of the project and organised by partners outside the partnership. Nature protection, forestry management and water management professionals were visiting our project sites where our measures were introduced in detail. An international conference and our international dissemination activities (newsletter, study visits) reached various target groups from abroad too. A great interest was shown towards our initiation and we consider our initiation as a Hungarian flagship project for introducing natural water retention measures in forests for the benefit of conservation and restoration of priority habitats.

6. Long term indicators of the project success: describe the quantifiable indicators to be used in future assessments of the project success, e.g. the conservation status of the habitats / species.

The long-term indicators of the project success are as follows:

- Coverage/extension and naturalness of the 91E0* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-padion*, *Alnion incanae*, *Salicion albae*) (the higher the value the better: at the habitat mapping, all habitat patches were registered by their habitat-type <ÁNÉR>, the type of habitat of community importance, and their naturalness <5-stage scale>.)
- Presence, coverage and size of invasive plant species stocks (the lower the better)
- An important long term indicator will be the level of ground water too.

6. Comments on the financial report

The standard statement of expenditure (available in the 'toolkit' on the LIFE web page) must be used and presented in a separate document, as described below – see section 8 on financial reporting. This part of the technical report must include the following points:

- overview of costs incurred,
- information about the accounting system and relevant issues from the partnership agreements
- an allocation of the costs per action

This information should include sufficient detail to establish a clear link between technical activities on the one hand and costs declared in the financial forms on the other. Please note that – as set out in the Common Provisions on the eligibility of costs – only costs that are necessary for and clearly linked to the activities carried out, are eligible. This section should justify and explain extraordinary cases, e.g. necessary costs not foreseen in the budget, persons changing status during the project from external consultants to employed staff (or vice versa), etc.

6.1. Summary of Costs Incurred

PROJECT COSTS INCURRED			
Cost category	Budget according to the grant agreement*	Costs incurred within the project duration	%**
1. Personnel	418 581	409 708,55	30,91%
2. Travel	35 797	28 821,72	2,17%
3. External assistance	511 917	515 751,37	38,91%
4. Durables: total <u>non-depreciated</u> cost	80 477	91 048,37	6,87%
- <i>Infrastructure sub-tot.</i>	0	0	-
- <i>Equipment sub-tot.</i>	80 477	91 048,37	6,87%
- <i>Prototypes sub-tot.</i>	0	0	-
5. Consumables	154 939	146 641,55	11,06%
6. Other costs	54 884	47 965,26	3,62%
7. Overheads	86 700	85 425	6,45%
TOTAL	1 343 295	1 325 361,82	100%

*) 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

Due to the significant changes in the project, the original budget of the project was modified. The modification request to the grant agreement has been submitted to the Commission on 22nd July 2014 followed by a completion on 9th September 2014. The documents were accepted and the

project modification request was confirmed by the EC on 9th January 2015 (please refer to the letter of the EC, Ref.: ENV/E.3 LB/sp ARES (2015) 81897). The reallocation affected both beneficiaries' budgets.

Flexibility of 30.000 EUR and 10%:

Project costs by cost category incurred during the project show minor discrepancies by they stay within the allowed flexibility of 30.000 EUR and 10%:

- The incurred Personnel cost is 8 872,45 EUR less than the foreseen amount.
- The incurred Travel cost is 6 975,28 EUR less than the projected amount.
- The incurred External assistance cost is 3 834,37 EUR more than the foreseen amount but stays within the 30 000 EUR and 10% flexibility.
- The incurred Equipment cost is 10 571,37 EUR more than the planned amount but stays within the 30 000 EUR flexibility.
- The incurred Consumables cost is 8 297,45 EUR less than the foreseen amount.
- The incurred Other cost is 6 918,74 EUR less than the planned amount.
- The incurred Overheads cost is 1 275 EUR less than the projected amount.

In Total the incurred cost is 17 933,18 EUR less than the planned amount.

Beneficiaries and the Project Coordinator had a continuous contact in order to ensure the proper financial reporting on the project implementation. Beneficiaries provided financial information by sending all appropriate supporting documentation for all expenditure, such as tender documents, invoices, purchase orders, proof of payments, salary slips, time sheets and any other documents used for the calculation and presentation of costs on a monthly basis. The external project coordinator may requested corrections in order to file the correct financial documentation. In case of finding not proper invoices (i.e. missing action code) the project coordinator requested the correction.

Personnel costs

Regarding personnel costs, Beneficiaries registered the working hours spent on the project in their time sheets by actions. The staff working on the project was employed by work contracts and staff costs are reported on the basis of the actual gross salary plus obligatory social charges and statutory costs included in their remuneration. The personnel costs are proportional. All costs were planned and foreseen.

In the case of NAIK-ERTI – due to their internal accounting system – a different amount of personnel cost is reclaimed (please refer to column M2 in sheet 'Personnel' in their financial report). As per their internal rules, the calculation of the reported personnel costs equals the accumulated monthly personnel costs: personnel costs are divided by the productive time units on a monthly basis (each month) and this quotient is multiplied by the number of project time units of the particular month. The figures of each month are added up and represent the reportable and reclaimable amounts.

2% rule: It applies only for NAIK-ERTI, being a public body. The total staff cost of the permanent civil servant staff of the beneficiary was 40 623,17 EUR. The own contribution of NAIK-ERTI is 42 838,39 EUR. The sum of the public organisations contributions to the project exceeded the sum of the salary costs of the civil servants charged to the project by 5,45%, so it complies with the 2% rule (Article 24.2 of the Common Provision).

Travel and subsistence

Travel costs are registered as per the national legislation (based on the eligible monthly price of fuel announced by the National Tax Authorities, the official fuel consumption rate and the distance).

Accommodation costs of NAIK-ERTI at performing activities in the course of action D.1 are based on invoices published by KASZÓ. Referring to Article 26 of the Common Provision “costs related to invoicing ... between associated beneficiaries and the coordinating beneficiary” are ineligible. As there are no other possibilities to accommodate the experts of NAIK-ERTI in Kaszó (it is a small village with appr. 120-130 inhabitants) experts of the AB stayed at the hunting lodge operated by KASZÓ. The invoices published by the CB on the accommodation of NAIK-ERTI-experts do not include profit elements. (Please refer to the declaration of KASZÓ on the accommodation costs of NAIK-ERTI personnel, attached as Annex 16 to the IncR).

There were some unforeseen travels in the financial report of NAIK-ERTI, most of them are costs related to project meetings (Action F.1) other than planned to be held together with SC meetings (Action F.2). There were also some unplanned stays (accommodation costs) related to monitoring activities.

External assistance

External assistance costs are in line with the figures of the project proposal. However, as reported in section 5.1.16 of the IncR, KASZÓ decided to produce the gates by their own personnel, which means that a part of the incurred costs related to action E.2 are reported and accounted among staff costs and consumables. All reported items are planned.

Durable goods

Among durable goods only equipment had been calculated. KASZÓ reported an item among equipment which was not foreseen: a coupling-hook was installed to the small bus making it able to transport larger tools to the project area. There is 1 unforeseen item reported by NAIK-ERTI: some accessories (i.e. RAM) to laptops and notebooks for proper data registration. Please note that one of the laptops purchased by NAIK-ERTI (item No. 5 registered in the financial tables) has broken down and was replaced by a corresponding item (the Acer Ultrabook NB Aspire S3-391-53334G52add notebook was replaced by an Asus S400CA CA006H notebook).

Consumables

Most of the consumable costs refer to performing the construction activities in the course of the conservation actions (Action C.3) and are borne by KASZÓ. All items were planned and foreseen.

Other costs

Reported other cost items include the cost of permissions, the fee of publication of the procurement procedures in the official website (not planned in the project proposal but compulsory elements of the procurement procedures), and catering (press conferences and public information meetings). Invoices of catering were published by KASZÓ. Referring to Article 26 of the Common Provision “costs related to invoicing ... between associated beneficiaries and the coordinating beneficiary” are ineligible. Please note that there are no other possibilities to provide catering in Kaszó (it is a small village with appr. 120-130 inhabitants). The invoices published by the Coordinating Beneficiary on catering do not include profit elements.

Please note that there are items among other costs reported with payment dates earlier than invoicing dates. Such costs refer to publication fees of procurement procedures (compulsory element) and the invoices are published only after paying the fees (regular procedure in Hungary).

Overheads

Overheads represent proportional reported costs (7-7% of the sum of personnel, travel, external assistance, consumables, other direct costs and eligible equipment costs of each beneficiary individually).

VAT status of Beneficiaries

The Beneficiaries' VAT status is as follows:

- KASZÓ reclaims the value added tax, therefore they report net amounts in the project
- NAIK-ERTI cannot reclaim VAT, therefore they report gross amounts. The AB could not get the statement of the National Tax Authorities, their self declaration countersigned by the auditor is attached to the Final Report.

6.2. Accounting system

Beneficiaries and the Project Coordinator have a continuous contact in order to ensure the proper financial reporting on the project implementation. For the smooth operation of the accounting and reporting systems of the project a financial administration guide was created and shared with the partners. As per set in the guide, beneficiaries provide financial information by sending all appropriate supporting documentation for all expenditure, such as tender documents, invoices, purchase orders, proof of payments, salary slips, time sheets and any other documents used for the calculation and presentation of costs on a monthly basis. Partners provide a copy of the timesheets of their personnel, a chart on the breakdown of person hours by actions and copies of salary slips. Copies of the work contracts were also requested. For the travel cost the partners are forwarding a summary table with all travels, summary tables by car and the copies of travelling warrants. External assistance, equipment, consumables and other costs are reported as the following: copies of the documentation on the procurement procedures are forwarded to the coordinator as well as the copy of order forms, bills, delivery notes or other documents that certify the delivery of the item in subject.

All documents are sent first electronically for check. If necessary, the project coordinator requests the completion of the documents (calculation mistakes might be revealed, action codes are also checked, further supporting documents might be requested – as the most often requests). When the documents are correct and have the proper supporting/justifying materials, Beneficiaries provide the hard copy of the documents. All documentation bears the identification number of the project LIFE12 NAT/HU/000593. In most cases, especially in the case of invoices with high amounts, the providers put the project reference and the action code on the invoice. In case of smaller invoices (i.e. purchase of consumables) the issuer of the invoice (especially when they issue invoices by the cash register) cannot put the project reference on the invoice, the respective beneficiary adds the project stamp together with the action code.

Both beneficiaries apply softwares (KASZÓ: Libra3S, NAIK-ERTI: Számadó in 2013 and EOS integrated financial software from 2014) in their accounting. KASZÓ-LIFE project has separate registration numbers in the accounting systems. In the case of KASZÓ: the registration of cash and cash equivalents is in account no. 38610, accruals are registered in accounts no. 4794, 4834 and 96717, while the registration of costs is in the account no. 67130. NAIK-ERTI applied the code 706 in the old accounting software, and IH-064 is the current code of the project expenditure.

Invoices – before their registration in the accounting systems – are formally checked by the administrators (compliance with the relevant national legislation) and the expert (compliance with the LIFE rules). The financial manager supervises the registration process and compares the registered items with the individual invoices. The accounting process considers the relevant rules within the organisations (i.e. remittance rules, cash management rules, etc.) and the relevant national legislation (i.e. accounting, tax laws, etc.)

6.3. Partnership arrangements

The first pre-payment (397 650,4 EUR) arrived to the account of KASZÓ on 13th September 2013. As part of the first financial contribution of the EC, an amount of 63 367,6 EUR was transferred to NAIK ERTI on 26th November 2013.

The second instalment (397 650,4 EUR) from the EC arrived to KASZÓ's account on 26th February 2016. KASZÓ transferred 63 367,6 EUR to NAIK-ERTI's account on 1st March 2016.

The administration of the project went smoothly according to the procedures set in the Partnership Agreement. Beneficiaries had a monthly reporting commitment which was fulfilled by sending a copy of their time sheets, travel sheets, and tables of other project related costs (external assistance, consumables, etc.). Beneficiaries also sent a copy of their invoices, salary slips and other documentation that justify the reported amounts. The Project Coordinator checked these reports and added the amounts in an excel table, that was recommended by the Commission (LIFE TES). The attitude of Beneficiaries to financial monthly reporting was good.

6.4. Auditor's report/declaration

The official details of the auditor are as follows:

*Official registration number
of the organisation:* 000047
Name of the organisation: BALANSZ-AUDIT Kft.
Address of the organisation: 1162 Budapest, Csömöri u. 346.

*Official registration number
of the auditor:* 002991
Name of the auditor: József BIRINYI
Address of the auditor: 1062 Budapest, Andrásy út. 81. I.em. 1.a.

The auditor was selected after a procurement procedure on 9th December 2015, Balansz-Audit Ltd gave the most favourable offer. Contract was signed on 19th December 2018. Works were started the same day with the analyses of the digitalized procurement documents (offers, contracts, invoices) and the staff costs. In January 2019, the auditor spent several days in Kaszó with the analyses of the paper based documentation. In February 2019, the audits were continued in Kaszó and also, started in Sárvár (at NAIK-ERTI). Though the contracted deadline for accomplishing the works were due to 31st January 2019, the works could not be finished because of the accounting system of NAIK-ERTI. Activities are finalised in March 2019.

The auditor summarised his findings and suggestions in an audit report. All recommendations were taken into consideration when finalising the financial tables submitted with the current Final Report. The auditor's report is annexed to the financial report. It follows the format of the standard audit report form downloaded from the LIFE website. The auditor in his report declares that the financial report is in compliance with the LIFE+ Programme Common Provisions, the national legislation and accounting rules.

6.5 Summary of costs per action

Action number	Short name of action	1. Personnel	2. Travel and subsistence	3. External assistance	4.a Infrstrctr	4.b Equipment	4.c Prttyp	5. Prc h ls Ind	6. Consumables	7. Other costs	TOTAL
A.1.	Procurement procedures	7 824	237	11 140	0	85 885	0	0	136	1 050	106 272
A.2.	Technical planning	9 292	246	41 858	0	0	0	0	0	10	51 406
A.3.	Permit procedures	12 307	656	0	0	0	0	0	0	34 687	47 650
A.4.	Stakeholder consultations	12 432	86	0	0	0	0	0	0	0	12 518
C.1	Reservoir in forest Bükk	5 235	55	20 247	0	0	0	0	17 874	0	43 411
C.2	Conservation of Lake Baláta	2 596	25	617	0	0	0	0	772	0	4 010
C.3	Eliminating Alluvion of Lakes Kúvölgy #1 and #2	5 833	186	159 447	0	0	0	0	27 273	0	192 740
C.4	Enlargement of Lakes Kúvölgy (Lake #3)	5 749	65	41 308	0	0	0	0	34 766	0	81 888
C.5	Enlargement of Lakes Kúvölgy (Lake #4)	7 412	235	68 100	0	410	0	0	44 508	0	120 666
C.6	Retention of watercourses	6 102	126	3 979	0	0	0	0	19 067	0	29 275
C.7	Reconstruction of service roads	2 778	1 460	33 664	0	0	0	0	1 725	0	39 628
C.8	Suppression of invasive species	70 877	3 809	8 147	0	0	0	0	0	0	82 833
D.1	Monitoring	35 325	5 079	2 977	0	0	0	0	503	0	43 885
D.2.	Socio-economic impact	8 244	0	0	0	0	0	0	0	0	8 244
D.3	Habitat mapping	50 527	64	0	0	0	0	0	0	0	50 591
E.1	Online communication	14 284	0	6 585	0	0	0	0	0	0	20 869
E.2.	Gates, notice boards	1 012	143	4 587	0	4 753	0	0	0	0	10 496
E.3.	Educational trail	3 478	85	24 034	0	0	0	0	0	79	27 676
E.4.	Media work	12 098	251	0	0	0	0	0	0	474	12 822
E.5.	Informational materials	3 691	77	0	0	0	0	0	0	2 925	6 693
E.6	Public information meetings	3 525	30	0	0	0	0	0	0	82	3 637
E.7	Guided excursions	3 872	309	0	0	0	0	0	0	4 433	8 614
E.8	Layman's report	254	0	0	0	0	0	0	0	778	1 032
E.9	Post project communication plan	202	0	0	0	0	0	0	0	0	202
E.10	International conference	8 241	229	0	0	0	0	0	0	3 448	11 918
F.1	Project management and monitoring of project progress	85 445	2 461	79 063	0	0	0	0	15	0	166 984
F.2	Steering Committee	9 898	217	0	0	0	0	0	0	0	10 115
F.3	Training, workshops and meeting for the project beneficiaries' staff	6 493	186	0	0	0	0	0	0	0	6 679
F.4	Networking with other LIFE and/or non-LIFE project	14 095	12 502	0	0	0	0	0	0	0	26 597
F.5	External audit	449	0	10 000	0	0	0	0	0	0	10 449
F.6	After-LIFE Conservation Plan	137	0	0	0	0	0	0	0	0	137
F.7	Potencial synergy LIFE-EEOP	0	0	0	0	0	0	0	0	0	0
Over head		0	0	0	0	0	0	0	0	0	85 425
	TOTAL	409 709	28 822	515 751	0	91 048	0	0	146 642	47 965	1 325 362

Major discrepancies between this table and the summary of costs per action set out in the grant agreement (form FB or R2):

High ratio savings on certain actions (A.4, C.1, C.2, D.1, E.1, E.3, E.4, E.5, E.6, E.8, E.9 and F.2) compensated unforeseen or higher costs of other actions, such as in the case of A.3 Permit procedures, C.8 Suppression of invasive species, F.1 Project management and enabled us to introduce a new action, D.3 Habitat mapping, completing our monitoring activities and serving the long term sustainability of project results.

A.3 Permit procedures: the forest usage fee of a permit was extremely high (28 549 EUR) compared to cost of other permits and this more than doubled the cost of the action.

A.4 Stakeholder consultation: we have managed to save on stakeholder consultations, as the foreseen staff costs became lower. The total cost of the activity was 2/3 of the foreseen costs.

C.1 Reservoir in forest Bükki: As the own staff was not needed as planned; we saved some costs on this action.

C.2 Lake Baláta: installation of the water-level control object was much cheaper than foreseen. Instead of 14 262 EUR we spent only 4 010 EUR on this activity.

C.3, C.4, C.5 actions proved to be well planned.

C.6 Retention of watercourses: Consumables cost more than expected, that is the reason of the higher costs.

C.8 Suppression of invasive species: We had an overspending here compared to the plans. Chemical treatments need to be introduced in heavily infected areas, that is the reason for the increased costs.

D.1 Monitoring: We have managed to save on NAIK-ERTI's staff costs, so the total costs of the action were only 2/3 of the planned amounts.

D.3 Habitat mapping: This action was not planned. We requested the eligibility of this extra activity in our 2nd amendment request. Cost of the action was transferred from actions where we had some savings.

E.1 Online communication: We have managed to have savings on this activity, only 2/3 of the foreseen costs were spent here.

E.3 Educational trail: The development of the trail cost significantly less, we saved ~40 000 EUR here as we have chosen to carry out a trail on a moderate price but still serving the same communication and dissemination objectives.

E.4 Media work: Saving were made here too, especially on staff cost.

E.5 Informational materials: We spent significantly less staff on the elaboration of information materials than planned in the project proposal, therefore we saved 7 818 EUR on this action.

E.6 Public information meetings: Costs were only half of the planned here, we saved 4 436 EUR by choosing cost effective methods, with reduced organisation costs (renting fee, catering was reduced).

E.8 Laymann's report: Writing and editing costs were less than planned.

E.9 Post project communication plan: Writing cost of the plan was less than planned.

F.1 Project management: The costs of project administration were higher than foreseen as financial administration and technical management of project activities required more own personnel than previously planned.

F.2 Steering committee: In contrary to F.1, there were some savings on F.2: 7 694 EUR.

7. Annexes

Digital versions of all annexes listed in this section of the report are provided on the attached pendrive.

Please note that deliverables (or milestone related documents) set in the project proposal are marked bold in the report in order to clearly distinguish them from other, optional deliverables which are also attached.

Paper copy annexes of the current final report are outlined with grey in the following list.

List of keywords and abbreviations used

ABBREVIATION	DESCRIPTION
KASZÓ	KASZÓ Forestry Stock Company – Coordinating Beneficiary (at the submission of the project proposal: Ministry of Defence Kaszó Forestry Stock Company)
NAIK-ERTI	NAIK ERTI - National Agricultural Research and Innovation Centre Forest Research Institute – Associated Beneficiary (at the submission of the project proposal: ERTI – Erdészeti Tudományos Intézet - Forest Research Institute)
HUF	Hungarian Forint (national currency)
EUR	Euro
CB	Coordinating Beneficiary
AB	Associated Beneficiary
SC	Steering Committee
PA	Partnership Agreement
ha	hectare
DDNPI	Duna-Dráva National Park Directorate – relevant authority in nature conservation and Natura2000 sites
FM or AM	Ministry of Agriculture
MKEB	Magyar Közbeszerzései és Elektronikus Beszerzési Zrt. – the company subcontracted for the public procurement (action A1)
DDVIZIG	Dél-Dunántúli Vízügyi Igazgatóság (South Transdanubian Water Management Directorate) – the subcontracted company for technical planning and surveillance (action A2)
EIC	Environmental impact study
EEOP	Environment and Energy Operational Programme
NÉBIH EI	Forest Management Directorate of the National Food Chain Safety Office

IncR	Inception Report with reporting date of 26 th June 2014
MTR	Mid-Term Report (current document)
PR	Progress Report
IB of the EEOP MA	Intermediary Body of the Environment and Energy Operational Programme Managing Authority

7.1 Administrative annexes

Submitted with the 1 Inception Report:

ANNEX 1

- Government Decision No. 1467/2013 (VII.24.) in Hungarian (on ERTI becoming the member institution of the National Agricultural Research and Innovation Centre (NARIC) – therefore referred as NAIK-ERTI in the. Please refer to IR 3.3 Problems encountered section 1.

ANNEX 2

- **Partnership Agreement with annexes signed by both Beneficiaries**

7.2 Technical annexes

The Annexes contain documentation related to A, C, D and F actions, without F4. Annexed of action F4 are listed under dissemination annexes.

Submitted with the 1 Inception report:

ANNEX 3 (ACTION A1)

- Photos of the purchased equipment
- Letter of ERTI on 20.11.2013

ANNEX 4 (ACTION A4)

- **Memos of 4 stakeholder meetings**

ANNEX 5 (REFERRING TO ACTIONS C1-C9, D1, E2-3)

- Overall map illustrating the location of all activities (separately marking the activities that were carried out in the reporting period)

ANNEX 6 (ACTION C.8)

- **Map illustrating the location of elimination works carried out**
- **Photo documentation**

ANNEX 7 (ACTION D.1)

- Preliminary monitoring plan
- **Monitoring Plan (deliverable of the action)**
- Location monitoring parcels and control parcels
- Photo documentation

ANNEX 12 (ACTION F.1)

- **Signed contract with the project management company (deliverable of the action)**

-
- Travel report and photodocumentation of the international kick-off meeting of the successful East-European LIFE2012 projects

ANNEX 13 (ACTION F.2)

- **Extract of the SC decisions**

ANNEX 14 (ACTION F.3)

- **Educational package (deliverable of the action)**
- **Training event administration report (deliverable of the action)**

ANNEX 15 (ACTION F.4)

- **Documentation of the participation on the HUTURJAN conference on 14-15.10.2013**

ANNEX 16

- Overview map on the area of the EEOP project and the LIFE project

ANNEX 17

- Declaration of KASZÓ on the accommodation costs of ERTI personnel

Submitted as annexes to the 2nd Mid-Term report:

Annex A.1

- Photos of the equipment purchased after 30/04/2014 (period covered by the IncR)

Annex A.2

- Environmental Impact Study (in Hungarian)
- **Technical plans for Actions C.1, C.2, C.3, C.4, C.5, C.6**
- Final construction drawings for Actions C.1, C.2, C.3, C.4, C.5, C.6

Annex A.3

- **Water right permits (vízjogi létesítési engedély)**
- **Environmental permission (környezetvédelmi engedély)**
- **Forest utilisation permit (erdőhasználati engedély)**

Annex A.4

- **Documentation of 14 stakeholder meetings (attendance sheets, memo, photos)**

Annex C.1

- Overall map of the location of the action
- Photo documentation and video shots on the works performed

Annex C.2

- Overall map of the location of the action
- Photo documentation before the start of the works

Annex C.3

- Overall map of the location of the action
- Photo documentation and video shots on the works performed

Annex C.4

- Overall map of the location of the action
- Photo documentation and video shots on the works performed

Annex C.5

- Overall map of the location of the action
- Photo documentation and video shots on the works performed

Annex C.7

- Overall map of the location of the action
- Photo documentation and video shots on the works performed

Annex C.8

- **Overall maps of the locations where the elimination was performed (separate maps for 2014 and 2015)**
- **Photo documentation on the works performed**

Annex D.1

- Overall map of the project area indicating the locations of the groundwater monitoring wells
- Chart illustrating the groundwater level as a result of precipitation from May 2014 to November 2015 on the KASZÓ-LIFE project area
- Photodocumentation

Annex F.7

- **Report on the synergies of the EEOP and LIFE project (in Hungarian)**
- Overall map of the EEOP and LIFE project areas
- Photodocumentation

Submitted as annexes to the 3 Progress Report (Reporting Date 28/04/2017):

Annex A1

- Tender documentation
- Report Assessment and Evaluation of Tenders
- Proof of direct approach
- The offer of the selected supplier – Sziget-Melor Mélyépítő és Szolgáltató Kft.
- Invoices of Sziget-Melor Mélyépítő és Szolgáltató Kft. and their proof of payment

Annex A3

- **Water rights implementation permit (vízjogi üzemeltetési engedély)**
- Operating rules of Lake Bükk (Bükk-tó üzemeltetési szabályzat)
- Operating rules of Lakes Kűvölgy (Kűvölgyi-tavak üzemeltetési szabályzat)
- Notification on the operating permit being non-appellable and legally binding
- **Amended decree of the water rights implementation permit**
- Notification of Forest utilisation

Annex A4

- **Minutes of the stakeholder consultations held in the reporting period**

Annex C1

- Overall map of the location of the action
- Photodocumentation on the works performed
- **Minutes of the technical handover-takeover (referring also to actions C.2, C.4, C.5, C.6)**

Annex C2

- Overall map of the location of the action
- Photodocumentation on the works performed
- **Minutes of the technical handover-takeover (Please refer to the annex to Action C.1)**

Annex C3

- Overall map of the location of the action
- Photo documentation on the works performed
- **Minutes of the technical handover-takeover (referring also to Action C.7)**

Annex C4

- Overall map of the location of the action
- Photodocumentation on the works performed
- **Minutes of the technical handover-takeover (Please refer to the annex to Action C.1)**

Annex C5

- Overall map of the location of the action
- Photodocumentation on the works performed
- **Minutes of the technical handover-takeover (Please refer to the annex to Action C.1)**

Annex C6

- Overall map of the location of the action
- Photodocumentation on the works performed
- **Minutes of the technical handover-takeover (Please refer to the annex to Action C.1)**

Annex C7

-
- **Minutes of the technical handover-takeover (please refer to the annex to Action C.3)**
 - Annex C8*
 - **Overall maps of the locations where the elimination was performed (2014, 2015, 2016)**
 - **Photodocumentation on the works performed**
 - External expert contract for chemical treatment
 - Annex D1*
 - Report on baseline survey
 - Chart illustrating the groundwater level as a result of precipitation from May 2014 to March 2017 on the KASZÓ-LIFE project area
 - Photodocumentation
 - Annex F1*
 - Time sheet of Kitti Szalai (9/2013)
 - Annex F2*
 - **Extract of the SC decisions**

Submitted as annexes to the 4 Progress Report (Reporting Date 30/09/2018):

- Annex A1*
 - Requests for offers (plastic boats)
 - Offers (plastic boat)
 - Report on procurement (plastic boat)
 - Notification of companies giving offers (plastic boat)
 - Invoice (plastic boat)
 - Picture (plastic boat)
 - Tree ring measurement equipments and software related documents (Requests for offers, Offers, Invoice, etc.
 - Picture (tree ring measurement equipments, software)
- Annex C5*
 - Requests for offers (A. Removing chumps)
 - Offers (A. Removing chumps)
 - Report on procurement (A. Removing chumps)
 - Notification of companies giving offers (A. Removing chumps)
 - Contract (A. Removing chumps)
 - Offer, order form (B. Wild alarm)
 - Invoice ((B. Wild alarm))
 - Photo: wild alarm (B. Wild alarm)
 - **Photo: installing wild alarm (B. Wild alarm)**
- Annex C8*
 - **Overall maps of the locations where the elimination was performed (2017, 2018)**
 - **Photo documentation on the works performed**
- Annex D1*
 - D1 increment core sampling
 - Groundwater level data set
 - Groundwater level analysis 2014-2017
- Annex D3*
 - Description of tasks and schedule
- Annex F2*
 - **Extract of the SC decisions**

Annex F4

- **Documentation of 8 networking events**
- **Presentation on 28th March 2018**
- Letter of Support to Mecsekerdő Co.

Submitted as annexed to the current 5 Final report:

Annex A.1

- Photos of the ground water level sensors

Annex A.4

- **Memos of the last two stakeholder consultations held in the reporting period: Local farmers on 14/11/2018 and DDNPI (national park) on 20/11/2018**

Annex C.5

- Photo: 1_Lake Kűvölgy 4 before the work.JPG
- Photo: 2_Lake Kűvölgy 4 during the work.JPG
- Photo: 3_Lake Kűvölgy 4 during the work.JPG
- Photo: 4_Lake Kűvölgy 4 during the work.JPG
- Photo: 5_Lake Kűvölgy 4 after removing chumps.JPG
- C5 Contract - A. Removing chumps (Szerződés C5 tuskózás).pdf
- C5 Handover-takover report (Átadás-átvételi jegyzőkönyv).pdf
- C5 Notification of companies giving offers - A. Removing chumps (Tuskózás kiértékelések).pdf
- C5 Offers - A. Removing chumps (Tuskózás árajánlatok).pdf
- C5 Report on procurement - A. Removing chumps (Tuskózás jegyzőkönyv árajánlatokról).pdf
- C5 Requests for offers - A. Removing chumps (Tuskózás árajánlatkérő).pdf

Annex C.8

- 0_Overall maps of the locations where the elimination was performed 2018.jpg
- 1_Robinia pseudoacacia before the work.JPG
- 2_Elimination of Robinia pseudoacacia.JPG
- 3_Robinia pseudoacacia after the elimination 1.JPG
- 3_Robinia pseudoacacia after the elimination 2.JPG
- 4_Prunus serotina before elimination.JPG
- 5_Elimination of Robinia pseudoacacia.JPG
- 6_Prunus serotina after elimination.JPG
- 7_Ailanthus altissima before elimination.JPG
- 8_Elimination of Ailanthus altissima.JPG
- 9_Ailanthus altissima after elimination.JPG

Annex D.1

- KASZÓ-LIFE D1 Egészségügyi adatok.zip (Health status data)
- KASZÓ-LIFE D1 Meteorológiai adatok.zip (Meteorological data)
- KASZÓ-LIFE D1 NDVI adatok.zip (NDVI data)
- KASZÓ-LIFE D1 Botanika adatok.xlsx (Botanical data)
- KASZÓ-LIFE D1 Monitoring jelentés 2014-2018.pdf (Monitoring report)
- Monitoring report summary in English
- KASZÓ-LIFE D1 Talajvízszint adatok.xlsx (Ground water level data)

Annex D.2

- KASZÓ-LIFE D2 Tanulmány.pdf (Socio-economic impact study)
- Impact study summary in English
- KASZÓ-LIFE D2 Kérdőívek.pdf
- KASZÓ-LIFE D1 Egészségügyi adatok.zip (Health status data)

Annex D.3

- KASZÓ-LIFE D3 Jelentés.pdf (Detailed habitat mapping report)
- Report summary in English

- **KASZÓ-LIFE D3 Szelvényleírások.pdf** (Detailed habitat analyses database I)
 - **KASZÓ-LIFE D3 Termőhelyfeltárás adatok.pdf** (Detailed habitat analyses database II)
 - **KASZÓ-LIFE D3 Termőhelytérkép fedvények.pdf** (Digital habitat map)
- Annex F.2*
- **Memorandum of 11 Steering Committee meetings (F2_H593_Extract_SC_Decisions_2018.11.12.pdf)**
- Annex F.5*
- Procurement documentation of external auditor
 - **Audit report (Audit Report.pdf)**
- Annex F.6*
- **KASZÓ-LIFE After LIFE Conservation Plan in English (KASZÓ-LIFE After LIFE Conservation Plan.pdf)**
 - **KASZÓ-LIFE After LIFE Conservation Plan in Hungarian (KASZÓ-LIFE After LIFE természetmegőrzési terv.pdf)**
- Annex F.7*
- **Report on the synergies of LIFE and EEOP project - summary in English (Report on the synergies of LIFE and EEOP project - summary in EN.pdf)**
- Annex MAPS*
- **Maps of actions C1-C8, D1, F7**

7.3 Dissemination annexes

7.3.1 Layman's report

(Annex E.8)

- **Layman's report in English (Layman's report - EN.pdf)**
- **Layman's report in Hungarian (Layman's report - HU.pdf)**

7.3.2 After-LIFE Communication plan – for LIFE+ Biodiversity and LIFE Environment Policy and Governance projects

(Annex E.9)

- **After-LIFE Communication plan – English (KASZÓ-LIFE Plan for post-project communication.pdf)**
- **After-LIFE Communication plan - Hungarian (KASZÓ-LIFE Projekt utáni kommunikációs terv.pdf)**

7.3.3 Other dissemination annexes

Submitted with the 1 Inception report:

ANNEX 8 (ACTION E.1)

- **Document on the registration of the domain names**
- Visual identity guide of the project

ANNEX 9 (ACTION E.2)

- Map with the location of gates and boards installed
- Design of the information board and the notice board
- Photo documentation

ANNEX 10 (ACTION E.4)

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- Documents of the Press conference held on 04.12.2013 (attendance sheet, presentations, photos, memo)
 - Media appearances of the project

ANNEX 11 (ACTION E.6)

- Report on the 1st public information meeting (deliverable of the action)
- Documentation of the 1st public information meeting (invitations, attendance sheet, photos, presentations)

Submitted as annexes to the 2_Mid-term report:

Annex E.3

- Photos on the fences to be removed

Annex E.4

- Press dossier
- Revised communication plan

Annex E.6

- Report on the 2nd public information meeting (deliverable)
- Documentation of the 2nd public information meeting (invitations, attendance sheet, photos, presentations)

Annex F.4

- Documentation of 4 networking events

Submitted as annexes to the 3_Progress Report (Reporting Date 28/04/2017):

Annex E1

- 1st Newsletter (HU and EN)
- List of addressees

Annex E3

- Overall map of the location of the educational trail
- Implementatin permit (Tanösvény létesítési engedély)
- Photodocumentation on the new fences
- Photodocumentation on installed boards and resting places
- Graphic design of the boards

Annex E4

- Press dossier

Annex E5

- Brochure (HU)
- Flyer (HU)
- Maps (HU)

Annex E7

- T-shirt
- Photodocumetation on the first guided excursion
- Attendance sheet on the first guided excursion
- Minutes on the first guided excursion

Annex F4

- Documentation of 5 networking events
- Presentation on 21st March 2017
- Presentation on 23rd March 2017

Submitted as annexes to the 4_Progress Report (Reporting Date 30/09/2018):

Annex E1

- 2nd newsletter in Hungarian
- 2nd newsletter in English
- 3rd newsletter in Hungarian
- 3rd newsletter in English
- List of Hungarian addresses
- List of International addresses

Annex E4

- Press dossier

Annex E5

- Contract for printing
- 1st modification of contract for printing
- Brochure (EN)
- Flyer (EN)
- Maps (EN)

Annex E7

- Photo documentation on the 2nd-6th guided excursions
- Attendance sheet on the 2nd-6th guided excursion
- Minutes on the 2nd-6th guided excursion

Annex E10

- Agenda
- Minutes
- Attendance sheet
- Presentations
- Photos
- Report

Submitted with the current Final report:

Annex E.1

- 4th, 5th and 6th newsletters in Hungarian and in English:
 - E1 4th newsletter in Hungarian.pdf
 - E1 4th newsletter in English.pdf
 - E1 5th newsletter in English.pdf
 - E1 5th newsletter in Hungarian.pdf
 - E1 6th newsletter in English.pdf
 - E1 6th newsletter in Hungarian.pdf
- List of addressees in Hungarian and in English:
 - E1 List of addressees (EN).pdf
 - E1 List of addressees (HU).pdf
- Website visits and views statistics (Website statistics 092015-122018.xlsx)

Annex E.4

- **2 radio news**
- **3 press conference held**
- **4 general articles in national press**
- **8 general articles in local press**
- **10 TV news**
- **11 specialized articles**
- **20 press releases**
- **49 internet articles**
- Facebook posts on KASZÓ-LIFE
- Press dossier Final
- Sajtó dosszié_Kaszó FINAL
- Youtube views

Annex E5

- Brochure (EN)
- Flyer (EN)
- Maps (EN)

Annex E.6

- Report documentation on 3. Public information meeting (14/11/2018)

Annex E.7

- Report on 7th guided tour (7. vezetett túra)

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- Report on 8th guided tour (8. vezetett túra)
- Annex E.8*
- Layman's report in English (Layman's report - EN.pdf)
 - Layman's report in Hungarian (Layman's report - HU.pdf)
- Annex E.9*
- After-LIFE Communication plan – English (KASZÓ-LIFE Plan for post-project communication.pdf)
 - After-LIFE Communication plan - Hungarian (KASZÓ-LIFE Projekt utáni kommunikációs terv.pdf)
- Annex F.4*
- Visit report: 06.11.2018 LIFEinFORESTS Zárókonferencia
 - International visit report: 04.12.2018 LIFE Alnus
- Annex MAPS*
- Overall project area
 - Location of Action E2 and E3

7.4 Final table of indicators

Annex Final table of indicators:

- Final table of indicators

8. Financial report and annexes

Submitted with 1_Inception Report:

- Standard Payment Request and Beneficiary's Certificate
- Beneficiaries' Certificates for Nature Projects
- Consolidated Cost Statement for the Project
- Financial Statement of the Individual Beneficiaries
- VAT Declaration of NAIK-ERTI

Submitted with current 5_Final Report:

- **Standard Payment Request and Beneficiary's Certificate**
- **Beneficiary's Certificate for Nature Projects**
 - o KASZÓ
 - o NAIK-ERTI
- **Consolidated Cost Statement for the Project**
- **Financial Statement of the Individual Beneficiary**
 - o KASZÓ
 - o NAIK-ERTI
- **VAT Declarations**
 - o KASZÓ
 - o NAIK-ERTI
- **Auditor's report**