(Projects submitting final reports after 1 January 2014 must use this format.)

LIFE Project Number

LIFE10NAT/HU/000020

FINAL Report

Covering the project activities from 01/09/2011 to 30/09/2018

Reporting Date

<28/02/2019>

LIFE+ PROJECT NAME or Acronym

Conservation of priority natural values in Turjánvidék Natura 2000 site southern unit

Project Data

Project location	Hungary
Project start date:	01/09/2011
Project end date:	31/08/2016> **Extension date:** <30/09/2018 >
Total Project duration (in months)	85 months (including **Extension of** 25 **months**)
Total budget	2 730 102 €
Total eligible budget	€
EU contribution:	2 047 577 €
(%) of total costs	75%
(%) of eligible costs	

Beneficiary Data

Name Beneficiary	Duna-Ipoly National Park Directorate
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1. List of contents

List of abbreviations

DINPD – Duna-Ipoly National Park Directorate

MoD DEB – Ministry of Defence Defence Economic Bureau

BFC –Budapest Forestry Company

WWF – World Wide Fund for Nature Hungary

MoA – Ministry of Agriculture

EC – European Commission

SAC – Special Area for Conservation

SR – shooting range

NCA – nature conservation area

PA – partnership agreement

IR – inception report

PR – progress report

MTR – midterm report

HD – Habitats Directive

CMP – Conservation Management Plan

IAS - Invasive Alien Species

FR – final report

2. Executive Summary (maximum 5 pages)

Between 01.09.2011. and 30.09.2018. in *"Conservation of priority natural values in Turjánvidék Natura 2000 site southern unit" LIFE+ project*, *Duna-Ipoly National Park Directorate, Ministry of Defence Defence Economic Bureau, Budapest Forestry Company* and *WWF Hungary* aimed the conservation and state improvement of the natural assets in the southern unit of *'Turjánvidék' SAC*, which is one of the most extensive, continuous humid and sand habitat systems of the Middle Hungarian Region. Sand steppes, juniper-poplar forests, alder-ash forests, bog meadows and Molinia meadows are present here with outstanding numbers of protected plant and animal species (e.g. flagship species Hungarian Meadow Viper).

Conservation problems of the area were the *shortage of water (Threat 1.)*, *spread of alien species (Threat 2.)*, *intensive mowing* (*Threat 3.)*, *illegal area use* (*Threat 4.)* and *lack of information* (*Threat 5.)*.

To address the threats above, we took the following **measures** and achieved the **results** below during the project period:

Threat 1.: 3 *water management objects operate* in the area of Dabas Turjános NCA and *10 smaller and 4 larger water management objects work* in Táborfalva SR (**Action C4**). These serve primarily the *conservation of the fragmented and dried-out remnants of alder-ash gallery forests and Molinia meadows*, however, these contribute also to the optimal water conditions of the habitats of the whole 'Turjánvidék' Natura 2000 site.

Threat 2.: With *gentle chemical treatment* we *treated* and *post-treated invasive plant species in sand steppes and sand dune thickets (1172 ha –* **Action C1***)* and *nursed the planted native forests (36.17 ha –* **Action C2***)*. Thus a significant core area developed, where the repeated infection is of low probability. *Alien species were treated and post-treated in alder-ash gallery forests* (*59.45 ha (incl. 14.59 ha Russian olive removal*), too, and *nursing of ash and poplar* took place (*4.57 ha –* **Action C3**).

Threat 3.: For the protection of the *Hungarian Meadow Viper*, the size of its *habitat was extended through the conversion of arable lands into grasslands* in **Action C5** (*on 55 ha alfalfa was sown and now thinning intensively, biodiversity enhancement was also carried out + 19.1 arable land was purchased in* **Action B1** - *and re-grassed representing a more complex grass structure each year*). *We introduced cattle grazing instead of intensive mowing* (by the end of 2016) as optimal viper habitat management *on 900 ha*, and *on 2400 ha altogether* as favourable conservation management; grazing was carried out (**Action C5**). Arboreal *IAS species were cleared from a 4.58 ha area* to connect viper habitats (**Action C6).**

Threat 4.: To prevent illegal access to the area, numerous *dirt roads were closed by crossing gates, which had to be maintained (41 pcs)*. We *eliminated also an illegal sand pit and the tree and shrub rows connected to this action were planted and nursed (1.3 ha*) 73 t illegal waste was removed.– **Action C7.**

Threat 5.: The *website* of the program attracted cca. 80,000 visitors altogether - **Action D1)**, we *shot also a project film* **(Action D7).** *Children of the region or laymen interested* could have visited a safe part of the military area on *'Green Days'* and got acquainted with its natural values and the project actions (*7 occasions* - **Action D5)**.

We shared information on our project site and results also on *scientific occasions (15 publications/posters/presentations* - **Action D8).**

The know-how on *defence against invasive plant species* was collected, best practices were presented in *1 national and 1 international professional forum.* To disseminate information on the conservation and research of the region for professionals, *a Rosalia volume on Turjánvidék Natura 2000 site was issued* (540 pcs), *a manual for IAS management was*

revised and edited again (Hungarian and English – 500 pcs), *IAS brochure for laymen* with practical hints and alternative native species was issued (12,000 pcs) (**Action D9**). On the results of the project a *Layman's report was issued* (2000 pcs) **(Action D10)**.
Management monitoring took place to document exactly the effects of habitat management (in *32 sample areas*) and *biodiversity monitoring* was carried out to survey the effects of management on biodiversity (*survey on Hungarian Meadow Viper, Arthropoda taxa, strictly protected bird species, etc., 30,552 GIS records on flora and fauna were collected*, etc. - **Action E2).**
An *After-LIFE conservation management plan* was compiled to safeguard the improved natural status of the area, which is provided by the results of our project **(Action E3).**
Some of the actions were fulfilled even with extra content. Action A2 and connected C4 were delayed. Action C6 could be implemented with a decreased content. In Action D6 the compilation of the simplified CMP of the SR took more time than foreseen. All our original project aims remained viable during the project period.
Our project results will be fully sustainable until the end of 2019, which is officially guaranteed by the After- LIFE plan. After 2019, sustainability may be negatively affected by the new SR military developments.

3. Introduction (1 page)

Description of background, problem and objectives:

The *overall objective* of the project is the improvement of the natural state of the southern part of 'Turjánvidék' Natura 2000 site, which comprises 7300 ha. In the humid territories Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) (91E0), Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) (6410), Alluvial meadows of river valleys of the Cnidion dubii (6440), Alkaline fens (7230) and in the drier sand areas a mosaic of Pannonic sand steppes (6260) and Pannonic inland sand dune thickets (91N0) can be found, and these are of outstanding conservation value. In the area we can find: 24 Natura 2000 species of community importance (Hungarian Meadow Viper is of priority importance), 31 strictly protected, 266 protected species, and 24 red data book species.

Threats targeted by the project:

- water shortage of the area
- spread of invasive plant species
- inadequate habitat management for the Hungarian Meadow Viper
- lack of information in stakeholder groups (military users, locals, conservation professionals, etc.)

Specific objectives of the project were:

1. to improve the water conditions of the above-mentioned area
2. to decrease drastically the amount of the invasive plant species here
3. to change area use from mechanical mowing to cattle grazing in Hungarian Meadow Viper habitats
4. to disseminate information on the natural assets and their conservation to various groups (military users, conservation professionals, local people, laymen, children)

Socio-economic context:

The southern edge of Pest County is one of with the lowest living standards in Hungary. Those parts of the project area which are closer to town Dabas (which already belong to the agglomeration of Budapest) have higher living standards. Cutting operations, forestation and nursing were carried out by local companies providing employment possibilities for many local people. The land-leasers are also local people.

Expected longer term results:

With the use of the water management objects a more favourable water supply can be provided for the Natura 2000 habitats and species on the long run. The cca. 100% elimination of the invasive plant species from the managed areas results a large core area where alien species have difficulty to colonise again. The native forests planted in the place of alien plantations will highly contribute to this long term result. The shift from mowing to cattle grazing in the Hungarian Meadow Viper habitats and beyond is guaranteed by a declaration on respecting the conservation management requirements (signed by the leaseholders) on the long term. IAS management, transformation of IAS plantations into native forests, re-grassing, the shift from mowing to grazing and water retention were carried out in 98% of the areas originally planned. The project website can be visited even after the project ended and it conveys information on the project site and results. The boards remain in their place and also distribute project information. The conservation materials for the military users can be used for a long term as well. The possibility of the free visit of the nature trail in the safe part of the SR is further advertised on our webpage and gives opportunity to get to know the natural assets of the project area.

4. Administrative part (maximum 3 pages)

4.1 Description of the management system

Participants of HUTURJAN project are:
Coordinating beneficiary: ***Duna-Ipoly National Park Directorate*** was founded in 1997. Its area of responsibility lies in the central part of Hungary, including the Duna-Ipoly National Park, 8 landscape protection areas and 30 nature conservation areas. Natura 2000 areas cover nearly 250,000 ha, and among the areas managed by the Directorate there is one with European Diploma, as well as several Ramsar areas and forest reserves.
DINPD is the conservation management organisation of the project area.

Associated beneficiaries:
Ministry of Defence Defence Economic Bureau is a background institution for the Hungarian Defence Forces specialized for completing tasks related to the accommodation conditions, the environmental, administrative and residential needs of organizations governed and controlled directly by the Minister of Defence besides the operation, representation and development of immovable used by them. The MoD DEB operating directly under the direction of the General Director is responsible for the nature conservation and environment affairs at MoD. Lawmaking, comprehensive and operational management of environmental affairs and execution of EU-financed projects have top priority among the general scope of duties.
MoD DEB is the property manager of the Táborfalva SR.

Budapest Forestry Company is a 100% public institution under the Ministry of Agriculture, whose aim is the coordination of military activities with forest, game management and agricultural activities. Established in 1993, the company has been active, in accordance with its business profile, in the following fields: forest and game management, marketing in tourism, maintenance of community recreational installations and protected geological and natural values, conservation of the natural and cultural heritage.
The Dabas Forestry Directorate of the company works on an area of about 10,000 ha.
BFC is the special manager of the Táborfalva SR.

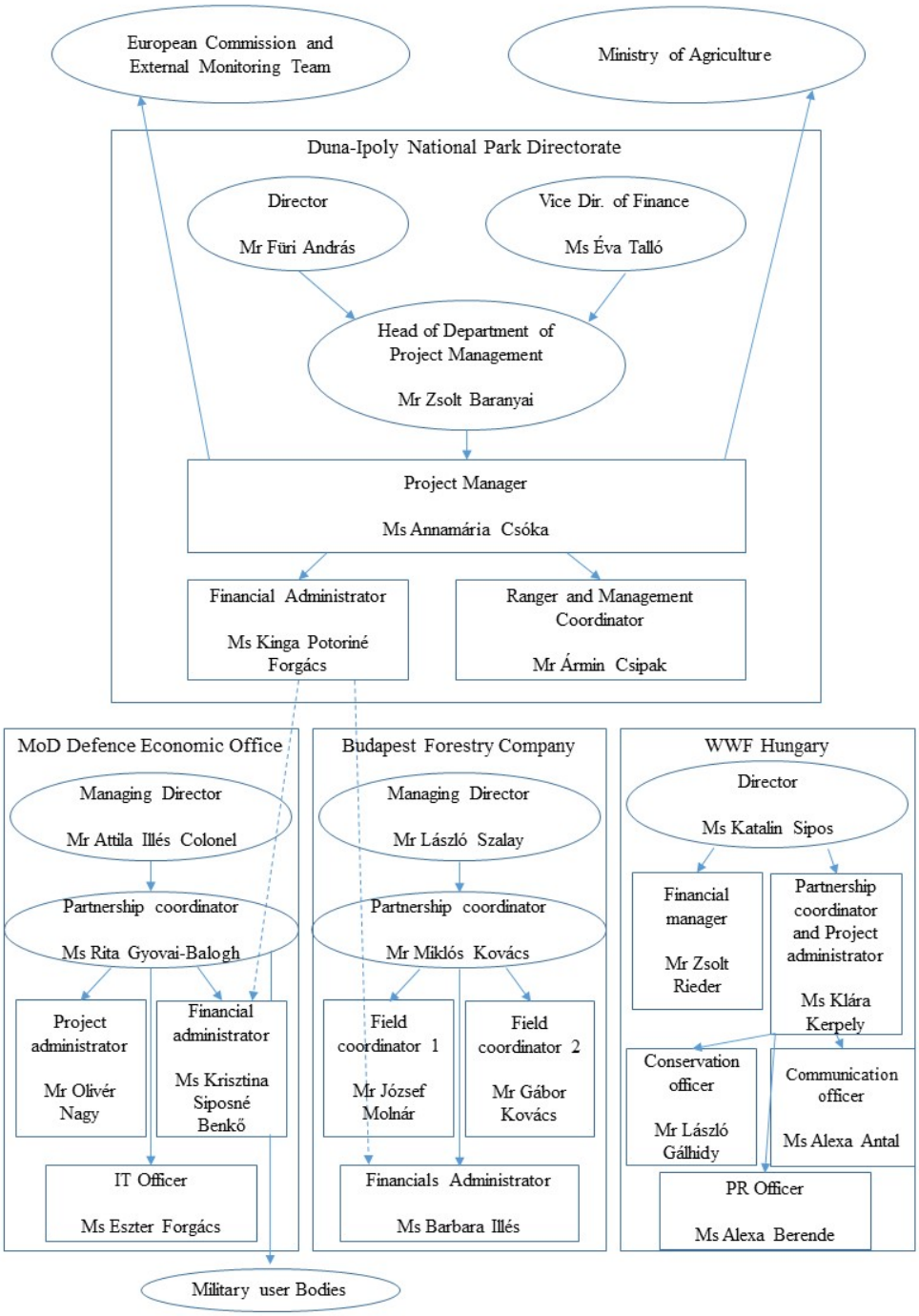
WWF Hungary is a non-profit organisation and launched its office in 1991. With regard to its nature conservation goals, the organisation focuses on forests, rivers, wetlands, extensive land use, the conservation of some endangered species, as well as general environmental problems. The main goal of WWF Hungary is to improve the ecological status of species and habitats in Hungary and to contribute to that goal on European level.
WWF is responsible for communication actions in the project.

All partners had previous experience in LIFE project implementation.

The **initial phase** of the project dated from 01.09.2011. (project start date) to 22.02.2012 (PA is put into force). In this period the major part of the personnel of the project was recruited, most of the equipment needed for the project implementation was purchased and the system of partners' cooperation was elaborated. The translation of English reporting forms and data sheets of LIFE were implemented together with the translation of the whole project proposal into Hungarian to help all the project personnel and responsible persons.

For the implementation of former HUNSTEPPICOAKS project, we rented an office in Nagykőrös (Nagykőrös, Lőrinc pap utca 3.), which we used further for the management of HUTURJAN project. (For a photo of office see Annex 4.1.1.)
The PA regulates the detailed technical, administrative and financial cooperation between the partners. It was completed and supervised by all partners and was signed by their responsible leaders on 22.02.2012. For PA see 4.1.2. Annex on CD.
The list of the personnel, who worked in HUTURJAN project is provided in Annex 4.1.3. on CD.

Organigram of the project (regarding the names of the participants, state in 09.2017.)
(Answer to Point 5. in Ref. Ares (2017) 4141761-23/08/2017).*:*



The project was implemented through the continuous cooperation of the project personnel of all partners. Everyday conversations via telephone and e-mail were the most characteristic (to be environment friendly and achieve cost and time efficiency). The project manager directly contacted with the project coordinators of the partners in most cases.

However, if more issues to discuss were collected, workshops were held, with the participation of stakeholder parties. If field negotiations were needed, those were organised and carried out. Regarding the latter activity, asking for entry permits to the SR was a permanent task (The project manager asks for entry permits through MoD DEB, and Bakony Combat Centre issues the permits).
The information-flow on project-related issues was always mutual between the coordinating beneficiary and the associated beneficiaries. It was the project manager who was responsible for the management of these processes.
We summoned a kick-off project meeting on 11.11.2011. (photo in 1MTR Annex 4.1.2.)

The **second phase** of the project was the longest, between 22.02.2012 and 30.09.2018, when the project aims were implemented.
Now we are in the **third phase**, which is the final stage until the final report is accepted.

Project amendments:
We applied for the extension of the original project duration to 31.12.2017 (by 16 months) and our request was accepted by the EC on 27.07.2016. The primary reason for this was that the construction of the water management objects in Táborfalva SR was delayed. See 1st amendment to the GA Annex 4.1.4. on CD.

We called for another amendment to the Grant Agreement. The reason was that the project had savings which could be effectively spent on further conservation activities in the project site - see 2nd amendment to GA Annex 4.1.5. on CD.

There was a 3rd amendment to the GA, because of the following reason: our field coordinator, Mr György Verő became ill and had to go on sick leave for a longer period and finally left DINPD. The decreased staff could not cope with the large quantities of extra work. Although later Mr Verő was substituted, the new college was a complete fresher and obviously couldn't take his place. Thus certain main actions of the project were delayed and we were given an extension again. Because of this, the chief aims were reached but unfortunately we could not manage to fulfil most of the additional tasks of the 2nd amendment to the GA.
(For the 3rd amendment to the GA see Annex 4.1.6. on CD.)
Due to the changes, the PA was also modified, see Annex 4.1.7. on CD.

In most cases we held common annual project workshops where the results achieved and the project plans for the given year were negotiated with project partners. As for planning, we usually compiled annual workplans for the project years, which were signed by all partners.

A public tendering expert was hired for the project by MoD DEB to assist public tendering procedures.

We have delivered the IR on 08.06.2012 (Annex 4.1.8. on CD), 1st PR on 07.06.2013 (Annex 4.1.9. on CD), 1MTR on 23.01.2015 (Annex 4.1.10. on CD), 2MTR on 18.04.2016 (Annex 4.1.11. on CD) and 2PR on 12.06.2017. (Annex 4.1.12. on CD).

In most cases the project manager communicated by e-mail with EC representative Mr László Bécsy Technical Desk Officer through our monitoring expert Mr András Kovács of external monitoring team NEEMO. With our monitoring expert we communicated via e-mail or telephone (in general and technical questions the project manager, in detailed administrative and financial questions the administrative and financial coordinator of DINPD). Major cases regarding the change of the content of the project were presented to him in e-mail and after that we waited for the permit from the EC.
Astrale-GEIE external monitor, Andrej Bača visited our project on 03.05.2012. The external monitoring team (Mr Bent Jepsen and Mr András Kovács, NEEMO EEIG) visited us on 29-30.04.2013. On 16-17.07.2014 Mr András Kovács visited us again (see photo in Annex 4.1.13.). On 14-15.04.2015 the representatives of the European Commission (Mr László Bécsy and Ms Paivi Rauma) and the external monitoring team (Mr. András Kovács) visited our project (see photo in Annex 4.1.14.) On the first day the achievements of the project were presented in the main office of DINPD in Budapest as well as administrative and financial documents of the project were supervised. On the second day they visited the project area where project results were also presented. Other visits took place on 08-09.09.2016., 15-16.11.2017 and finally on 20-21.09.2018.

4.2 Evaluation of the management system

The elaborated management system (See Point 4.1.) provided us a smooth and regular correspondence between the partner organisations and the external monitoring team and the European Commission.
DINPD, as beneficiary had to cope with serious workload, solving complex tasks and unforeseen problems. DINPD rather underestimated the personnel capacity need of these tasks and charged far less personnel at the beginning. Our colleagues were always overloaded with tasks and if somebody of the staff had to leave, there was no other to take his duties as nobody else had the information on whole segments of the project.
The most serious problem during the project implementation was that Mr György Verő was no longer in the project and we were unable to substitute him effectively. Due to this fact a seriously increased workload was imposed on the project manager, which led to delays in more actions and we were unable to fulfil tasks taken in Amendment to the GA No.2.

5. Technical part (maximum 50 pages)

5.1. Technical progress, per task

5.1.1. ACTION A1 - Preparation of forest habitat management

Action status: completed
Responsible partner: BFC
Description of the results achieved:
Negotiations with the Forestry Directorate of Government Office of Pest County were held from the end of 2011. Forest planners of this competent authority launched the new forest management plan preparation in field, from the end of May, 2012.
Negotiations with the forestry authority were held by each forest compartment, where BFC and DINPD also participated. Forest management plans valid from 2013 to 2022 were compiled and endorsed by the competent forestry authority at the beginning of May, 2013 (for two of these see Annex 5.1.1.-1). All the forest compartments of the project area were subjects of this planning process and the conservation management tasks foreseen in our program were incorporated as well. Former HUNSTEPPICOAKS project showed that the success of gentle forest reconstruction under our extreme site and weather conditions is dubious. For this reason, in the planning phase we used the possibilities provided by the applicable forestry legislation to decrease these areas.
Planning of the exact timing and spatial distribution of invasive management and discussion on technologies took place from the launch of the project.
Conservation management works were planned in details at the beginning of each year and included in the annual workplan of the project.

The Law for public tendering changed in summer, 2013 and as a consequence of the new regulations public tendering procedures were carried out by BFC (with the guidance of the external public tendering expert company of our project) to charge companies with the forestry works.

Outputs (BFC):
- forest management plans for 2013-2022 for the compartments of the project area which are managed as forests, incorporating the tasks of HUTURJAN LIFE+ project
- the new forest management plans were permits for the implementation of nature conservation management works of this project
- forest habitat management works were planned and prepared in details each project year

Time schedule: completed (deadline: 31.03.2018.)
As the overall duration of the project was prolonged, the deadline of this action should have been also modified, as obviously this was a task for the beginning of each year of the project duration.
The prolongation of this action is not officially accepted (thus it is not illustrated in the timetable), however, it would have been very reasonable.

Problems: no
Modifications: no

5.1.2. ACTION A2 - Preparation of water supply regulation

Action status: completed
Responsible partner: DINPD
Description of the results achieved:
We contacted with representatives of water management authorities and made field trips to the sites of future water retention from winter, 2012 to collect information on the actual state.

In Táborfalva SR:
Our field coordinator could have joined our project in January, 2012. In the southern part of Turjánvidék Natura 2000 area DINPD practically had no field experts before. Thus it took a longer time for the field coordinator to get the efficient information on the area by himself and we could launch Action A2 only after that. The supervision of the compilation of the water retention drafts supposed well-founded conservation knowledge of the area. The development of the basic contact with the Táborfalva Military Base also required time, as this body is not a project partner (our partner is MoD DEB, which is a ministry organisation). The above mentioned facts and the long public tendering procedures contributed to the delay of this action.
We hired a geodesic expert to measure the heights of main points to provide a foundation for the detailed geodesic survey and water level modelling. The detailed geodesic survey on the SR was completed by 26.10.2014. For the results see a map in Annex 5.1.2.-1. on CD.

A negotiation with the military users (with the participation of the charged architect) on the water retention of the SR took place in Székesfehérvár (14.10.2014.) in the headquarters of Joint Forces Command. The main topic was to determine the quantity and location of the retained water, which can be accepted from the military training point of view. For a photo on a field negotiation see Annex 5.1.2.-2.

Regarding the draft itself, following the geodesic survey, the concept plan of water retention in the SR (described in the project proposal) had to be supervised. It proposed to develop two sluices on Channel XX. However, it turned out that the direct drive of surface water to the Hungarian meadow viper habitat is obstructed by sand hills of significant height between the water providing Channel XX and the main viper habitats. That is why the construction of one of the sluices here was cancelled in the revised plan.
Cca. 25 km long Channel XX is the main channel in the vicinity of the SR. In the process of planning sluices built in this channel, several effects of the water retention rose, which were far beyond the scope of the project. Although the complex modification of the water retention effect of Channel XX remained a priority conservation goal on landscape level, in the present project the other foreseen sluice was built in Channel XX/a.
The content of the revised plan submitted to the authority was the following:

- Reconstruction of an old sluice at the end of the drainage system, on Channel XX/a, just before it falls into Channel XX.
- Three sluices to the intersections of three main branches of the drainage system and a military dirt road.
- 10 smaller regulated water locks on the main branches and sub-branches of the drainage system.
- Several earth made, unregulated, permanent water locks in the ditches along military dirt roads.

With the construction if these elements we achieved the same water retention goal as described in the project proposal. For an updated map see Annex 5.1.2.-3.

With drafting tasks we charged Viziterv Alba Ltd. on 27.08.2014. (the selection was implemented in the frame of public tender, led by DINPD, for documentation see Annex 5.1.2-4. on CD, for the contract see Annex 5.1.2.-5. on CD)
The application for water rights implementation permit for a hydrologic engineering project was submitted to the National Organisation for Rescue Services, Ministry of Interior on 09.06.2015. Parallel to this, the draft for construction and the technical documentation for the public tendering were compiled. Directorate for Rescue Services of Budapest finally issued its permit on 12.07.2016. (see Annex 5.1.2.-6 on CD). For the final construction drawing see Annex 5.1.2.-7. on CD.) The construction company was chosen in a public tendering procedure (led by MoD DEB). With Biocentrum Ltd. the contract for construction was bound on 19.09.2017. (see Annex 5.1.2.-8 on CD).

In Dabas Turjános NCA:
Middle Danube Valley Inspectorate for Environment, Conservation and Water kept us waiting for the reply for the application of water rights implementation permit for a hydrologic engineering project for two years. This authority started to ask for the completion of documents only in Autumn, 2012. The water rights implementation permit for hydrologic engineering was issued finally on 16.12.2013. (see Annex 5.1.2.-9 on CD). The public tendering procedure (led by DINPD) included the compilation of the final construction drawing for the water retention of Dabas Turjános NCA, together with the construction works, and Közmű Alagút Ltd. was charged. The complete public tendering documentation is available in Annex 5.1.2.-10 on CD., for the contract see Annex 5.1.2.-11. on CD). For the final construction drawing see Annex 5.1.2.-12. on CD.) For a photo on a field negotiation see Annex 5.1.2-13.

Outputs (DINPD):
1 permitted final construction draft for Dabas Turjános NCA water management objects
contract for construction works in Dabas Turjános NCA (for Action C4)
1 permitted final construction draft for Táborfalva SR water management objects
contract for construction works in Táborfalva SR (for Action C4)

Time schedule:
Táborfalva SR: original deadline: 31.03.2014
deadline: 19.09.2017.

Dabas Turjános NCA: last deadline accepted by EC: 30.06.2014
deadline: 26.09.2014.
Consequences for other actions: Action C4 is also delayed
As the construction date of the water management objects of Táborfalva was officially postponed, the deadline of this action should have been also modified, as it ends only with contracting for the construction.
The prolongation of this action was not officially accepted (thus it is not illustrated in the timetable), however, it would have been very reasonable.

Problems: yes
The extra long duration of the public procurement procedure, the more negotiations with the military users than foreseen and the fact that the permitting procedure of the water rights

implementation permit for a hydrologic engineering project was considerably longer than foreseen resulted in the delay of this action.

Modifications: There are more and smaller water management objects planned than foreseen in the proposal (Táborfalva SR). (Instead of 5 there are 4 medium size and 10 smaller ones, 14 pcs altogether.)
The modifications are accepted in letter Ref. Ares (2016) 3998017 29/07/2016.

5.1.3. ACTION A.3: Munition treatment planning

Action status: completed
Responsible partner: DINPD
Description of the results achieved:
The areas affected by the munition treatment in Action C8 (subjects of the munition treatment plan) were designated: areas of forest reconstruction, the sites of the water management objects and the area of the illegal sand pit. The contract with the selected company was signed on 18.05.2012. In all processes MoD DEB was drawn in, as responsible partner for the munition treatment. Photos on the sampling of the area and a munition found are in Annex 5.1.3.-1,2. The munition treatment plan was compiled by 29.08.2012. The plan is made up of the following sections: historical overview on the use of the SR, results of the fieldwork, results of the sampling activities, estimating the contamination of the soil, suggested methods of munition treatment, technical specifications, corresponding legislation, estimated time and budget needed for the activity.
For the munition treatment plan please see Annex 5.1.3.-3 on CD.

Outputs (DINPD): Munition treatment plan was compiled.
Time schedule: original deadline 31.05.2012, completed: 29.08.2012.
Problems: no
Modifications: no

5.1.4. ACTION B.1: Land purchase in the administrative area of Dabas

Action status: completed
Responsible partner: DINPD
Description of the results achieved:
On the 19.1 ha large ploughland (plot numbers: 0946/15, 0946/16 Dabas, for its photo and map see Annex 5.1.4.-1.,2) we had the preliminary value assessment compiled in November, 2011 (the complete document is in Annex 5.1.4.-3. on CD). The next stage was the obligatory permitting procedure with the National Land Fund, which was followed by the permitting procedure with the Hungarian State Holding Company. After we received both permits for the land purchase, the sale and purchase contract was compiled, which had to be permitted by the MoA. The contract was signed by both parties on 27.04.2012. (For the sale and purchase contract see Annex 5.1.4.-4. on CD).

To know their precise boundaries, the purchased land parcels were marked out by surveyors. The change of ownership was registered in the national land registry, where DINPD is listed as property manager of Dabas 0946/15, 0946/16 land parcels.

Although we incorporated sections in the sale and purchase contract which guarantee that the purchased land is dedicated for nature conservation purposes, the European Commission asked for further guarantee, thus we made a commitment before a notary regarding the definitive assignment of the land purchased in this project for nature conservation purposes (on 26.11.2012). For this document please see Annex 5.1.4.-5.).

For the decision on the change of land use from ‘ploughland’ to ‘meadow’ see Annex 5.1.4.-6. on CD.

For the land registry sheets with the new property manager (DINPD) and land use (meadow) see Annex 5.1.4.-7.

Outputs (DINPD): 19.1 ha large area, potential viper habitat is owned and managed by DINPD
Time schedule: deadline 30.06.2012., completed: 27.04.2012. (date of the sale and purchase contract)
Problems: no
Modifications: no

5.1.5. ACTION C.1: Control of invasive species in sand habitats

Action status: completed
Responsible partner: BFC
Description of the results achieved:
2012: Prior to the management, a more detailed assessment on the quantity of the invasive alien plant species was made by a specialist in March, 2012 (on 470 ha).
In July, 2012 the trunk injection and spraying of tree of heaven with Medallon herbicide took place. The shoot smearing of IAS common milkweed was implemented in the same 470 ha with Medallon combination. In September-October 2012 trunk injection of black locust, Russian olive and desert indigo together with the post-treatment of the tree of heaven was carried out.
2013: The more exact quantity of the invasives was surveyed by a specialist in March, 2013 (332 ha). Between May and October, 2013 the trunk injection and spraying of tree of heaven with Medallon herbicide took place. The smearing of common milkweed shoots was implemented also with Medallon combination. Trunk injection of black locust, Russian olive and desert indigo was carried out with Medallon.
The 1st post-treatment of the alien species managed in the 470 ha in 2012 was implemented.
2014: The quantity of the IAS was surveyed again by a specialist in March, 2014.
Between May and October, 2014 the trunk injection and spraying of tree of heaven with Medallon herbicide took place. The smearing of common milkweed shoots was implemented also with Medallon combination. Trunk injection of black locust, Russian olive, desert indigo and boxelder maple was carried out (370 ha). The 1st post-treatment of the alien plant species left alive in the 332 ha area managed in 2013 was implemented. The 2nd post-treatment of the invasive species was executed (managed at first in 2012, in 470 ha).
2015: In 2015, the following activities took place: Elimination of arboreal IAS, from August: 1st post-treatment on 370 ha, 2nd post-treatment on 332 ha, 3rd on 470 ha; elimination of herbaceous IAS, between April and September: 1st post-treatment on 370 ha, 2nd post-treatment on 332 ha, 3rd on 470 ha.
2016: In 2016, between April and September, the following activities were carried out:
Control of herbaceous IAS (shoot smearing): 2nd post-treatment in 280 ha, 3rd in 350 ha, 4th post-treatment in 470 ha. Between August and October, the following activities were implemented: control of arboreal invasives (shoot smearing and trunk injection): 2nd post-treatment on 280 ha, 3rd on 350 ha, 4th post-treatment in 470 ha.
For a map illustration of the implementation see Annex 5.1.5.10.
In **2017**, post-treatment was implemented in the remained problematic spots.

For the process and results of the elimination of tree of heaven please see Annex 5.1.5.-1,2,3.
For the trunk injection method for black locust and for the results see Annex 5.1.5.-4,5.

For the shoot smearing of common milkweed see Annex 5.1.5.-6. and for the result of this activity in the first year and in the second year of the management see Annex 5.1.5.-7,8,9.

Between 2012 and 2014 efforts were focused on the aggressively sprouting species like black locust, common milkweed and tree of heaven. To control these species, chemical treatment and regular post-treatment is inevitable. After the first chemical treatment in the entire target area of Action C1 was completed, it was followed by the partial eradication of Scotch and Black pine in 2015. Since these species are far less aggressive (they are not sprouting), no chemicals are needed. By seeds, they spread more slowly than the species mentioned above. Furthermore, the larger individuals usually serve as nesting trees for some protected (e.g. common buzzard) and strictly protected (e.g. white-tailed eagle and short-toed eagle) bird

species. For these reasons, pine trees were harvested as follows: in February, 2015, a 70 ha part of the target area was managed (ind. below 4 m). The rest was harvested in autumn 2016. All the large individuals were left standing. A very few young individuals were left standing to provide a next generation of large nesting trees. However, nearly all the youngest, couple of years old saplings were harvested.

Outputs (BFC): 1172 ha of Pannonian sand steppes and inland sand dune thickets are free of alien plant species in 98%
Time schedule: on-time, deadline: 31.12.2017.
Problems: no
Modifications: The size of the treated area became larger (1172 ha instead of the planned 1100 ha)
Outputs foreseen in Amendment to GA No.2.:
- 900 ha Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion coeruleae) (6410) and its surroundings are free of invasives in 70% is *not implemented*
- hawthorn is moderately decreased on 1100+900 ha is *not implemented*
As the duration of the project was prolonged, there was one autumn period (2016) and one more year (2017) extension also in the post-treatment of invasives, and its costs are budgeted in the project.

5.1.6. ACTION C.2: Restructuring of non-indigenous forests into indigenous ones

Action status: completed
Responsible partner: BFC
Description of the results achieved:
We grew native black poplar seedlings from the seeds we collected in the project site in May, 2012. (for a photo see Annex 5.1.6.-29.). The seeds collected in the project site underwent a genetic examination, which proved that the reproduction material doesn't contain foreign clones. The saplings were cultivated in a nursery for two years.

Forest regeneration (planting) was carried out between 2013-2015 in 26.13 ha (illustrated with light blue, numbered 1-8, in the map in Annex 5.1.6.30.) and 10.04 ha (in orange in the map, patch number 9), in 36.17 ha altogether. For further clarifications regarding the location and areas of the forest regeneration see 'Modifications' below.

In the areas of clear cutting, the forest regeneration methodology was the following: at first logging was implemented (for a photo see Annex 5.1.6.-1.). The next step was the clearing of the area with the aid of a forwarder (for a photo see Annex 5.1.6.-2.) and the chipping of the timber (Annex 5.1.6.-3.). The next phases were the removal of the trunks (Annex 5.1.6.-4) and their transportation off the site, arranging the site, deep ploughing and smoothing the surface and finally machine and manual planting with native poplar saplings. (For a photo on planting see Annex 5.1.6.-5.)

Photos on young native plantations taken in July, 2014 (planted in autumn, 2013) can be found in Annex 5.1.6.7-8.

Subsequently, nursing tasks were carried out in these new plantations each year: cutting back the saplings, disking and manual hoeing were implemented until the project ended (see Annex 5.1.6.-9).

In 2016, between January and March 14,000 pcs native poplar saplings were purchased for supplementing.

For the present state of plantations in all the numbered patches see photos in Annex 5.1.6.11 and 17 and Annex 5.1.6.-10-19. on CD.

In the patches illustrated with light green in the map (numbers 1-8), arboreal IAS species were removed with trunk injection method and grassland with shrubs developed again, thus the infestation source – threatening the natural grasslands – were eliminated. These areas comprise 11 ha.

From August, 2016 to the end of October, and in the following years until the project ended post-treatments of arboreal invasives were implemented (shoot smearing, trunk injection).

For the present state of the areas of the former IAS removal in all the numbered patches see photos in Annex 5.1.6.-21. and 25, and Annex 5.1.6.-20-27. on CD.

In the patches illustrated with dark green in the map, to regain a native arboreal vegetation, we had to remove the arboreal IAS individuals with trunk injection method (15 ha), no soil preparation with additional planting were needed.

From August, 2016 to the end of October, post-treatments of arboreal invasives were implemented (shoot smearing, trunk injection), until the project ended.

Outputs (BFC): 26.13 ha native forests were developed in the place of former IAS plantations, 10.04 ha native forest was planted in a new location (36.17 ha plantation altogether), further 15 ha IAS-infested forest was cleared and regained naturalness, 51.17 ha natural forest altogether

11 ha IAS plantations were transformed into natural grasslands with shrubs

IAS management took place on 26 ha altogether (11 ha+15 ha)

Time schedule: deadline: 30.09.2018.
Problems: no
Modifications: yes
Accepted in monitor's letter dated on 16.09.2013.
Instead of the originally planned 42 ha forest reconstruction we have 51.17 ha natural forests and 11 ha natural grasslands in the place of IAS-infested areas.

HUNSTEPPICOAKS project provided us with widespread experience in the topic of forest regeneration in the forest steppe zone. As we experienced here, the success of gentle forest regeneration with native species under the extreme soil and weather conditions (forest steppe zone) we have is dubious.
Consequently (negotiated with the EC) we cancelled gentle forest regeneration in those 8 plots where afforestation was proposed for the entire plot. These cover **11 ha**, and illustrated in map in **light green**. These areas became grasslands with shrubs, and form an infestation source no more.
However, there are large patches of recently abandoned ploughlands within the project site that are both seriously infected by invasive species at present and have a less favourable neighbourhood of plantations of introduced tree species, where total soil preparation can be used before the plantation. We reallocated the budget planned for the artificial regeneration of the 8 patches (11 ha) mentioned beyond. This way we could convert the selected plot to native forest (**10.04 ha**), in **orange colour** in the map.

A larger block (**15 ha**) where partial afforestation was proposed was withdrawn from gentle artificial forest regeneration as they contained sufficient amount of native habitats and native tree species even after the chemical elimination of the IAS individuals.
This area is illustrated in **dark green** in the map.

The **light blue** patches in the map were subjects to artificial forest regeneration and total **26.13 ha**.
See also the table below:

AREAS SUBJECT TO FOREST REGENERATION WITH SOIL PREPARATION (IN LIGHT BLUE AND ORANGE COLOURS)	FOREST UNIT	FOREST COMPARTMENT	AREA (HA)	patch number in map (a patch can be composed of more forest compartments)
TATÁRSZENTGYÖRGY	8	I	2,87	1

TÁBORFALVA	6	A	0,65	**1**
DABAS	42	Y	0,79	**1**
TÁBORFALVA	6	F	2,61	**2**
TÁBORFALVA	17	E	2,92	**3**
DABAS	41	G	3,58	**4**
DABAS	41	A	3,57	**5**
DABAS	42	U	1,63	**6**
DABAS	42	J	2,51	**7**
DABAS	42	V	5,00	**8**
DABAS	59	A	10,04	**9**
TOTAL			***36,17***	

AREAS SUBJECT TO IAS MANAGEMENT (TRANSFORMED INTO GRASSLAND)	11 ha	light green in map (patch numbers 1-8)
AREAS SUBJECT TO IAS MANAGEMENT (ARBOREAL IAS REMOVAL, REMAINED FOREST)	15 ha	dark green in map

As the duration of the project was prolonged, there were two more years extension also in the nursing of plantations, and its costs are budgeted in the project.

5.1.7. ACTION C.3: Reconstruction of alder and ash gallery forests

Action status: completed
Responsible partner: BFC
Description of the results:

Removal of boxelder maple and Russian olive:

In autumn, 2013, from a 14.59 ha (originally mentioned as 15 ha) large area Russian olive individuals were removed with stump treatment method. The post-treatment of the individuals (shoot spraying) was carried out in autumn, 2014, 2015, 2016 and 2017.
We cleared 44,86 ha alder-ash and hardwood gallery forest from IAS species (mainly boxelder maple) with the trunk injection technique between September-November, 2013. (In the proposal 56 ha was included, however, it proved to be a wrong number as in GIS the size of the area was originally 44,86 ha.)
From August, 2015, 2016 and 2017 post-treatment was carried out in the 44,86 ha large area.

The total area managed (boxelder maple and Russian olive) is 59.45 ha.

For the results see map in Annex 5.1.7.1., for a photo see Annex 5.1.7.-2.

AREAS SUBJECT TO IAS MANAGEMENT	forest unit	forest compartment	area (ha)
DABAS	43	I	4,04
DABAS	43	F	8,45
DABAS	43	H	22,23
DABAS	43	O	6,53
DABAS	43	TN1	14,59
DABAS	43	TI1	0,42
DABAS	43	TI2	1,90
DABAS	43	TI3	1,29
			59,45

Hybrid black poplar restructuring:
The logging was implemented in 4.57 ha hybrid black poplar plantation in winter, 2013. The majority of wood was removed from the area and was chipped. For a photo see Annex 5.1.7.-3.
In February, 2015, 9000 pcs of native poplar seedlings were purchased. The soil preparation (with pit boring) was carried out. In March, planting and cutting back took place, followed by manual nursing.
The plantation with ash individuals took place in 2015, in 1.41 ha. (In the rest of the logged area there are larger native tree individuals which remain and no additional plantation was needed). Nursing took place in 2015-2018.
For the location of the activity see map in Annex 5.1.7.1.

AREAS SUBJECT TO HYBRID POPLAR TRANSFORMATION	forest unit	forest compartment	area (ha)
DABAS	43	A	0,56
DABAS	43	E	0,61
DABAS	43	N	1,41
DABAS	43	V	1,99
			4,57

As in the period of the compilation of new forest management plans, parts of forest compartments were merged into other compartments, there was a misunderstanding in the possibility of carrying out the forest regeneration in the whole planned area, however, we managed to solve the problem, and carry out the action as planned before.

Outputs (BFC):

59.45 ha ash-alder and hardwood gallery forest and buffer is free of IAS

14,59 ha area is free of Russian olive

4.57 ha native plantation is carried out (0.56 ha ash, 4.01 ha poplar)

Time schedule: on-time, deadline: 30.09.2018.
Problems: no
Modifications: no
As the duration of the project was prolonged, there were two more years extension also in the nursing of plantations, and its costs are budgeted in the project.

5.1.8. ACTION C.4: Water control and retention in the southern unit of 'Turjánvidék' Natura 2000 site

Action status: completed
Responsible partner: DINPD, MoD DEB
Description of the results achieved:

Dabas Turjános NCA:
The construction of the three water management objects was implemented based on the final construction drafts (see Action A2) by Közmű Alagút Ltd. For the documentation of the construction see photos in Annex 5.1.8.-1. The water management objects were built by 30.10.2015. For the documentation of technical handover see Annex 5.1.8.-2. on CD. The work was continuously supervised by the charged technical supervisor, Heli and Heli Consulting Ltd. and our field coordinator, Mr György Verő. A map of the water retention system can be found in Annex 5.1.8.-3., for photos of the completed water management objects see Annex 5.1.8.-4.

The elements of the water retaining system are as follows (in NW to SE direction - from the water source to the target habitat):

- The last 500 meters of Duna-Tisza channel bed was significantly dredged in order to provide sufficient water level even in dry spring periods when active water retention is necessary. This section of the system is directly linked to the RSD part of river Danube. At the SE end of this section a concrete platform was constructed on the shore to host a diesel-fueled electricity generating unit, as well as a concrete ring in the channel bed itself to host the water pump.
- SE from the pumping unit platform Sluice No. I. was constructed. It aims to isolate the water providing channel from the water receiver channel in the active pumping seasons (dry springs). By the isolation of the two channel sections and active pumping higher water level can be developed in the receiver channel. In the rest of the year, this object retains the water in the receiver channel.
- A 3 km section of the receiver channel was not planned to modify. However, the manager of the channel has slightly swept it all the way long (not from the project budget).
- The receiver channel has an intersection with another channel section, so Sluice No. II. was built to drive pumped water towards the target habitat. Besides this the sluice can retain water in the intersecting channel as well.
- From Sluice No. II. a cca. 1200 m long channel section was dredged and reconstructed. This section runs among precious habitats so the highest precautions were applied.
- At the end of the system Sluice No. III. was constructed. This double sluice can retain water in the target forest habitat. From the sluice a 50 m long shallow channel bed was constructed in order to let the pumped water flow into the forest.

The operation plan of the water management system in Dabas NCA was accepted on 04.10.2018 (see Annex 5.1.8.-5. on CD).
The water management objects in Dabas Turjános NCA are in operation. According to the water supply (precipitation, water levels of source channels) it was the field coordinator who

supervised and changed the water levels by the sluices. For the positive results of water retention and the water management objects in operation see photos in Annex 5.1.8.-6.

Táborfalva SR:
The construction/reconstruction of the 14 water management objects (for a map see Annex was implemented based on the final construction drafts (see Action A2) by Biocentrum Ltd. Soil mechanic survey was also carried out in the future locations of the water management objects (between 01.03.2015 and 01.04.2015).
For the documentation of the construction see photos in Annex 5.1.8.-7. Parallel to the earthworks, supervision by bomb technicians was also provided. In timing, the dates of military trainings should have been also respected. The water management objects were built by 15.12.2017. For the documentation of technical handover see Annex 5.1.8.-8. on CD. For photos on the completed objects see Annex 5.1.8.-9. The work was continuously supervised by the charged technical supervisor, Heli and Heli Consulting Ltd., the project manager, representatives of MoD DEB and the personnel of the SR.
The operational plan of the water management system in Táborfalva SR was accepted on 21.12.2018 (see Annex 5.1.8.-10. on CD).
The water management objects in Táborfalva are in operation. It is the representative of DINPD, who supervises the water levels by the sluices. Following his/her suggestions it is the personnel of the SR that operate the sluices. For the positive results of water retention see photos in Annex 5.1.8.-11.

We purchased automatic measuring tools in 2018 (13 pcs) and these were deposited to the water management objects of crucial importance. It is very important, to continuously measure the water levels to be able to operate the water retention systems properly. This task is very time-consuming, and in addition, the SR is often closed for military trainings, so access is denied for civilians. The automatic tool collects and stores data, for this reason, we will have correct and complete data series. (For a photo see Annex 5.1.8.-12.)

Outputs (DINPD): 3 water management objects are completed in Dabas NCA and in working order

14 water management objects are completed in Táborfalva SR and in working order

Time schedule:
Dabas Turjános NCA: last deadline accepted by EC: 31.10.2015
deadline: 30.10.2015.

Táborfalva SR: original deadline 28.02.2015.
deadline: 15.12.2017.
Problems: yes, this action was delayed, for reasons see Action A2
Modifications: There are more and smaller water management objects than foreseen in the proposal (Táborfalva SR). (Instead of 5 there were 4 medium size and 10 smaller ones constructed, 14 pcs altogether.)
The modifications are accepted in letter Ref. Ares (2016) 3998017 29/07/2016.

5.1.9. ACTION C.5: Development of potential Hungarian Meadow Viper habitats with grazing

Action status: completed
Responsible partner: BFC, DINPD
Description of the results achieved:
Spatial and temporal planning of the conversion of ploughlands into grasslands and their grazing in Táborfalva SR and Dabas Turjános NCA took place from October, 2011.
Planning the management of the alfalfa field (55 ha) started from 2013, and took place in each year of the project duration.

Re-grassing in Dabas Turjános NCA: The 19.1 ha area was purchased at the end of April, 2012. We planned to sow alfalfa seeds in this ploughland, however, spontaneous processes of conversion to grassland launched. By the end of June, 2012, the predominate part of the area was continuously covered by a grassland made up of *Cynodon dactylon* and *Agropyron repens*. *Festuca rupicola*, which also occurs in the newly formed grassland, was surely the native grass-forming species of this site. *Molinia coerulea* is also present in the deeper parts of the grassed area. We had the area mown once and removed the hay in 2012, 2013, 2014 and 2015. This way we prevented weed invasion and supported the grass individuals strengthening. From 2016, the area is grazed by cattle. As this favourable spontaneous process took place, there was no need to perform the alfalfa sowing in this area. For photos on the original state and the result please see Annex 5.1.9.-1.

Re-grassing in Táborfalva SR:
Grassland habitat reconstruction was finally launched by the end of August 2013. After the delay (due to an extremely dry August in 2012 and a humid spring in 2013), alfalfa seeds were finally sown under optimal circumstances. In the proposal we foresaw 45 ha for re-grassing in the SR, however, this area was calculated based on aerial photos taken in a humid year (large areas were covered with water and were left out from area calculation). The exact size of the area turned out to be 55 ha. The alfalfa field was mown four times per year. From the nearby mown natural area, mowing side products (hay particles) rich in *Molinia* seeds were transferred to the freshly mown alfalfa field and were sown manually on a patch of it on 27.06.2014.
The re-grassing process proceeds well, the grassland completely substitutes the alfalfa in large areas. For photos on original state and results see Annex 5.1.9.-3.

Complexity enhancement of the same alfalfa field (amendment to the GA):
Besides the dominating grass species, 43 plant species were sown (250 kg seeds altogether), and 1500 pcs seedlings were planted on the SR alfalfa field. The selected species are characteristic to the arable land to be transformed but have low dispersion capacity. However, their seeds are relatively easy to collect from the nearby natural populations or can be cultivated ex situ, so these are available on the market. In addition to the dominant species, less frequent, protected species were sown as well. As the microrelief of the site is diverse, at first, a potential vegetation map was compiled. In the different habitat types, different seed mixtures were used. The pattern of sowing took place polygon by polygon according to this map. (For the vegetation map, photos of seed production and sowing/planting, coenological table and survey report see Annex 5.1.9-4.)
As a result of this action, the initial biodiversity of the site became much higher than the spontaneous spread would have produced. As the alfalfa is thinning out, the artificially settled species will quickly spread, and the re-grassing processes will be more complex, providing

good possibility for the re-colonisation of the Hungarian Meadow Viper from the neighbouring habitat.
On the other hand, this action is an excellent example of multi-species grassland reconstructions in a larger scale, which is a novel direction of grassland rehabilitations in Hungary.
The area will be monitored each year to follow the processes.

Grazing: Based on a decree in 2013 of the nature conservation authority, mowing was abandoned on a 134 ha large part of the viper habitats (All land leasing contracts were terminated in Táborfalva SR by 31.08.2014. Project partner BFC is responsible for the agricultural land use of the SR and it has the right to bind long-term leasing contracts. During 2014, a new call for lease tenders was out.)
The forestry companies (thus also BFC) were monitored by a new control organization, so the call for land lease tenders was cancelled. DINPD presented nature conservation regulations to BFC again which had to integrate them into the new call (see Annex 5.1.9.-5. on CD). The size and number of land blocks to be leased changed on more occasions during 2015. The new call was out on 17.09.2015. However, it (and the attached draft contract) did not include the nature conservation regulations compiled by DINPD (as sufficient nature conservation guarantees that the land will be managed in line with the necessary conservation requirements). Regarding conservation requirements, only general phrasing was incorporated, which is not legally binding. DINPD contacted BFC immediately, however, it turned out that they consider the general and theoretical nature conservation regulations satisfactory and the announced contract phrasing cannot be changed in this stage. If this situation had remained, it would have meant that the leaseholders are not obliged to respect the conservation regulations (to manage the leased area according to the habitat management needs of Hungarian meadow viper, or other Natura 2000 habitats or species.) To tackle this serious situation the EC send us a letter (on 29.10.2015.) to emphasize that the requirements have to be incorporated into the contract, otherwise, major results and budget elements connected to the project may be not accepted by the EC. As a result, after discussion between BFC and DINPD, a separate declaration was compiled and signed on 11.27.2015. by the winning land leaseholders for every land block. It included that the nature conservation regulations which were sent to leaseholders prior to contracting were accepted and received also as a printed document. The leaseholder accepted that he is obliged to respect these nature conservation regulations. In case these are not respected, the conservation status of the leased block is threatened and it leads to the immediate termination of the contract. (For the detailed correspondence see 2MTR Annex 5.1.9.1. on CD, for the declarations for every leased block see Annex 5.1.9.6. on CD). So the new type of grassland management could be launched in spring, 2016 on the whole known viper habitat.
In 2014, cattle grazing was already introduced in other areas of the SR as well, which were not foreseen in the project and were not leased permanently before. As shooting range, these are highly threatened by fire. As a part of a new fire control system developed in the SR jointly by the military users and DINPD, grazing was introduced in order to reduce fire fuel. In the sand areas, very cautious cattle grazing also launched to preserve the high biodiversity of these areas. Altogether 2400 ha area is grazed.
For photos from different years on grazing please see Annex 5.1.9-7.
See also map in Annex 5.1.9.-11.
As we lacked professional personnel capacity but needed to know, how the land leasers fulfil the nature conservation regulations on the land parcels, we hired an external expert to compile a report at the beginning of 2018. For the report please see Annex 5.1.9.-8. on CD.

For the same reason, we had to draw in external experts for the compilation of the annual grazing and ploughland management plan. The plan was presented by the project manager at a meeting with the land leasers, representatives of MoD DEB, BFC, Bakony Combat Centre at Táborfalva Base in April, 2018. For the discussed material see Annex 5.1.9.-9 on CD.
Regarding the grazing of the viper habitat, one problem emerged: the grassland has a special microrelief – that is why it is a suitable habitat for vipers. However, while grazing, the cattle prefer to stay on the sandy elevations and avoid the lower habitat patches. This puts a serious pressure on the sand grassland patches, which are grazed rather low. For this reason we had to fence off the higher elevations to spare them from degradation, as these are very important parts of the viper habitats. At the same time, we fenced off the area, where the cattle are driven out, when live-fire trainings are held (the viper habitat is the buffer zone of the live-fire training part of the SR.) For photos see Annex 5.1.9.10.

Outputs: 19.1 ha ploughland in Dabas NCA is changed into grassland - **DINPD**

55 ha alfalfa field is turned into grassland - **BFC, DINPD**

900 ha potential viper habitat is dedicated for grazing – **BFC, DINPD**

2400 ha area is grazed altogether in line with conservational measures
Time schedule: deadline: 30.09.2018.
As the overall duration of the project was prolonged, the deadline of this action should have been also modified, as obviously this is a task until the end of the project.
The prolongation of this action is not officially accepted (thus it is not illustrated in the timetable), however, it is very reasonable.

Problems: yes
In the call for lease tenders (and the draft contracts) affecting large areas of the project site, the nature conservation regulations were not included. On request of the EC, the serious problem was solved: contracts were completed by a declaration of the same value. For more details, see above.
Consequences on other actions: no
Modifications: Larger area is grazed than foreseen in the proposal, area extended on even potential viper habitats. (The size of the area is 900 ha except for 500 ha.)
The size of the grazed area in total is 2400 ha and serve different conservation aims.

5.1.10. ACTION C.6: Development of potential Viper habitats with transforming forests into meadows

Action status: completed
Responsible partner: BFC
Description of the results achieved:
We faced a serious problem in this action: although it was accepted by the military users prior to project submission, it revealed that – due to ballistic safety reasons - Joint Forces Command Bakony Combat Centre (the user of the SR) doesn't support the elimination of the invasive plantation patches of C6. Our project partner MoD DEB asked for their official statement in this question and the IAS elimination was again rejected by Joint Forces Command. DINPD compiled a letter and asked for seeking a quick solution for this problem. Through lengthy correspondence, it revealed that the military users of SR have no special staff to investigate the safety parameters of the SR, so an external weapon technology expert is needed. It turned out, that to hire such an expert, they had no foreseen budget (for the complete correspondence see Annex 5.1.10.-1. on CD). In the end, the EC was asked to judge whether the cost of this expert could be covered by the project (11.10.2015). On the permission of the EC, we drew in an independent weapon technology expert.
After data collection and field survey the charged expert compiled and submitted his report on 29.06.2016. This was followed by a negotiation and as a result an amendment to the special report was compiled and submitted on 17.09.2016. The report includes ballistic calculations on trajectories of used munition types and safety reasons. According to the report, the major part of the IAS patches in question serves safety purposes and for this reason their elimination cannot be carried out. However, from the planned approx. 30 ha area 4.58 ha can be removed. (For the weapon technology report and its amendment see Annexes 5.1.10.2-3. on CD, for map illustration see Annex 5.1.10.-4.)
IAS control started at the end of summer, 2017 (see photos in Annex 5.1.10.-5.-6). Results of the planned trunk injection technique for black locusts were clearly visible immediately and the treatment could be repeated in the same vegetation period, in Autumn, 2017. Desert indigo and Russian olive individuals were controlled with the stump treatment method, post-treatment was carried out and the area was completely cleared in 2018 (see photos in Annex 5.1.10.-7.-8).

Outputs (BFC):
Time schedule: original deadline 31.08.2016., deadline: 30.11.2017. (in 2018. only post-treatment was carried out).

Problems: yes
The military user of the SR doesn't allow us to carry out the IAS control due to safety reasons. Weapon technology expert was needed, whose report showed that the planned management area has to be decreased to 4.58 ha.
Consequences on other actions: no

Modifications: IAS control area is reduced from 30 ha to 4.58 ha.
The smaller managed area (4.58 ha) connects the present viper habitat with the re-grassing 55 ha alfalfa field (Action C5), however, in a much smaller area than foreseen.

5.1.11. ACTION C.7: Moderation of general threatening factors

Action status: completed
Responsible partner: BFC
Description of the results achieved:
Regulated closing of roads: 20 crossing gates were placed at the entrances of the dirt roads entering the project site to help to end the illegal and harmful use of the area (stealing timber, wildfire, waste deposits, motocross, quad, etc.) in May, 2012. These are very thick, hard metal ropes, which we can be moved more easily than an inflexible bar. The crossing gates can be opened with a key to provide access only for the authorised personnel. The remaining 21 crossing gates were placed out in July, 2012. Between the public road and natural habitats, on both sides of the crossing gates ditches were created as well (3000 m long altogether). (For photos please see Annex 5.1.11-1-2.)
Due to vandalism and illegal access attempts, the supervision of the crossing gates and ditches is a continuous task until the project ends (the light-reflection signs and the padlocks often have to be substituted).

Elimination of illegal sand pit: Waste transportation off the site was carried out. Parallel to the public road tree and shrub rows were planted in autumn, 2012, to hide the formal illegal sand pit. These are formed by *Populus nigra, Populus canescens, Ulmus campestris, Pyrus pyraster, Berberis vulgaris, Ligustrum vulgare, Crataegus monogyna, Euonymus europaeus*. (For a photo on the preparatory works, please look at Annex 5.1.11.-3.) On the fresh plantation please find a photo in Annex 5.1.11.-5. and on an older state in Annex 5.1.11.-6.)
Between the paved road and the sand pit a deep ditch was developed (06.2012.) to prevent the access of motorbikes and quads.
From the sand pit alien plant species (mainly black locust) were also eliminated from a 1.3 ha size area with trunk injection method in 2013, see photo in Annex 5.1.11-4.
Nursing the tree and shrub rows closing the sand pit was a task until the project ends.
As the overall duration of the project was prolonged, the deadline of this action should have been also modified. As the prolongation of this action is not officially accepted, it is not illustrated in the timetable.

For the coordinates of the crossing gates and the sand pit see Annex 5.1.11.-8.

Illegally deposited waste was removed from the area of 'Vezetési pálya', part of the SR, by 30.09.2018. For a photo see Annex 5.1.11.-7.

Outputs (BFC):

regulated closing of the roads crossing the project area with 41 crossing gates

halting the soil surface disturbance with closing the illegal sand pit and quitting the spread of invasives through their elimination (1.3 ha)

73 t illegal waste was removed
Time schedule:
regulated closing of roads: original deadline 31.12.2013., completed by 31.07.2012.
elimination of illegal sand pit: original deadline 31.10.2014., completed by 31.10.2013.
waste removal: completed by 30.09.2018
Problems: Due to vandalism, padlocks and boards have to be replaced.
Modifications:
Outputs foreseen in Amendment to GA No.2.:
- Regulated closing of the off-road access to the project area by the instalment of wooden pole bollards in around 4200 m length *not implemented*

- 5 small scale off-road motorbiking hot spots (sand pit, ‘Lődomb’ and 3 training hills) are completely closed from illegal traffic is *not implemented*
- 4 wooden chip reservoirs are designated and barriered *not implemented*
- 1300 m+600 m former dirt road is reconstructed, 2 U turn sites are designated to avoid traffic in Hungarian Meadow Viper habitats *not implemented*
- At least 3000 m unfavourable dirt roads are abandoned in Hungarian Meadow Viper habitats, further 2500 m is with restricted use *not implemented*

5.1.12. ACTION C.8: Implementation of munition treatment

Action status: completed
Responsible partner: MoD DEB
Description of the results achieved:
Originally, the areas of the munition treatment were the following: all areas of forest reconstruction, the sites of the future water management objects and the area of the illegal sand pit. However, exclusively the Hungarian Army Explosive Ordnance Disposal and Warship Regiment can implement the munition treatment tasks of our project. (It is an individual budgetary organisation and according to Hungarian legislation it is entitled alone to carry out the bomb disposal tasks.) For this reason, they are very busy. Furthermore, the acquisitions of the MoD DEB are carried out by a different organisation (Ministry of Defence, Defence Economic Office, Procurement Directorate), which fact also contributed to the delay of the acquisition procedure. To keep up with the timetable of the proposal, in this exceptional case Joint Forces Command Bakony Combat Centre provided bomb technician supervision for a major part of the forest regeneration works and in the illegal sandpit (free of charge). For a photo on an example of intact ammunition found in these areas see Annex 5.1.12.-1. For further photos see Annex 5.1.12.2. on CD. For documentation (e.g. worksheets) see Annex 5.1.12.3. on CD.
For the contract bound for munition treatment on 01.12.2014. see Annex 5.1.12.-4. on CD (later extended). Munition treatment was launched in spring, 2015, in forest regeneration areas of the project. Between 02.03.2015. and 01.04.2015 bomb technicians worked on 21 days in a 1.64 ha area and parallel to the forest plantation works they provided also continuous supervision.
The remaining munition treatment activities took place parallel to the construction of water management objects in Táborfalva SR, in autumn, 2017, on 1.01 ha. During the earthworks period of the water management objects (02.10.2017.-17.11.2017) an explosive ordnance was found in 8 cases, and in more than 8 cases they found a non-explosive ordnance.
Short description of the process of munition treatment:
Members of the Hungarian Army Explosive Ordnance Disposal and Warship Regiment get to the site prior to the launch of the earthworks. The patrol is led by a chief bomb technician and composed of max. 8 persons. The designated area is surveyed with VMH-3 type handhelp metal detector, in our case at a depth of 60 cm. If the equipment signals, the spot is cautiously dug up. If an explosive item or an equipment containing pyrotechnical material is found, this fact is reported to the MoD Bomb Technician Department on Duty. Depending on the type and the physical state of the ammunition it is eliminated on the spot or transported off the site.
Supervision by bomb technicians:
3 patrols are present parallel to the earthworks made. Their task is the identification and management of the ammunition revealed during the work.

As the overall duration of the project was prolonged, the deadline of this action should have been also modified. The prolongation of this action is not officially accepted (thus it is not illustrated in the timetable), however, it was very reasonable.

For maps on munition treatment see Annex 5.1.12.5-6.

Outputs (MoD DEB): 2.65 ha is free of dangerous ammunition
Time schedule:
original deadline 30.11.2014., delayed (because of the delay of Action C4)
deadline: 15.12.2017 (completion of the construction of water management objects in SR in Action C4)
Problems: no
Modifications: It was carried out in a smaller area than foreseen. (Foreseen: cca. 48 ha, actual: 2.65 ha)

5.1.13. ACTION E.2: Conservation management and communication monitoring

Action status: completed
Responsible partner: DINPD

Description of the results achieved:

Management monitoring:

In this action we planned and designated the locations of the sampling plots during the spring of 2012 (their spatial distribution is illustrated on the map in Annex 5.1.13.-1., one plot had to be changed as it was destroyed by fire, see below). We already started the monitoring activities from April, 2012, that year was dedicated for the basic state survey.

The management monitoring was carried out by our field coordinator and later the project manager: on the invasive species elimination in 10 permanent sampling plots for Actions C1, C6; on forest reconstruction in 10 sampling plots for C2, C3; forest naturalness change in 6 sampling plots for Actions C1, C2 and C3; structural development of potential viper habitats in 6 sampling plots for C5 and C6.

Elimination of invasive species:

The field coordinator, Mr György Verő implemented the monitoring action in each year between 2012 and 2016 and Ms Annamária Csóka in 2017 and 2018.
Results of invasive plant management monitoring show that the established management was highly effective. The majority of managed plots represent 100% efficiency, and all of them above 90% after one season of management. It became clear that overall efficiency was reduced rather by the lack of any management (due to missing a certain population of invasive plant species) than by the method of eradication.
For detailed data see table on CD, in Annex 5.1.13.2.

The field coordinator, Mr György Verő implemented the monitoring action in each year between 2012 and 2016 and Ms Annamária Csóka in 2017 and 2018.
Results of invasive plant management monitoring show that the established management was highly effective. The majority of managed plots represented 100% efficiency, and all of them above 90% after one season of management. For detailed data see table in Annex 5.1.13.2. on CD.

Reconstruction of forests:

Planted saplings show high vitality and survival rate in most of the forest reconstruction plots. Although complete soil preparation has a devastating effect on any natural vegetation, it seemed to be an effective way to transform highly degraded forest stands to that of native species. High summer precipitation and lack of extremely hot temperatures in 2014 had a major positive effect on the survival rate in the crucial first vegetation season after plantation. High proportion of strong 2nd year saplings survived in 2015 on the plots with complete soil preparation. However, in case of Action C3 where partial soil preparation was implemented (drilling), survival rate of saplings were below 10 percent of all saplings.
For detailed data see table on CD, in Annex 5.1.13.2.

Change of forest naturalness:
Forest naturalness survey was carried out using visual data collection according to TERMERD method (data collection method for the multifunctional qualification of forest naturalness) in 3-3 forest stands at both sites two times, in 2014 prior to the launch of

management, and in 2018 after the management took place The two sampled sites were: 1) Táborfalva SR (juniper-poplar stands) 2) Dabas Turjános NCA (hardwood riparian forest / ash-swamp forest).
Data collection was carried out by Mr László Gálhidy and Ms Annamária Csóka and the evaluation was prepared by Mr László Gálhidy. The tables with the data and the summary report are attached in Annex 5.1.13-3_on CD.

Structural development of potential habitats of viper:

The field coordinator carried out the monitoring in 2012, 2013, 2014 and 2015 and the project manager in 2017 and 2018.

Regarding the effect of grassland management of Hungarian meadow viper habitats, the abandonment of mowing clearly resulted in a higher level of vegetation cover. On the other hand, the amount of dry biomass started to accumulate quickly, so proposed grazing was inevitable. Besides the vegetation cover is against the predators of the viper, sufficient prey stock was also necessary for the species. The lack of any management on grasslands reduced the diversity of plant species and consequently the diversity of consumer levels as well. The development of Molinia spp. tussocks seems to be a slow process and needs the contribution if certain ant species as well. Till date, there are no characteristic tussocks after the years without mowing. The well-prescribed grazing removed the surplus grass biomass from the area, however, the quantity of Orthoptera and rodents increased.
For detailed data see table on CD, in Annex 5.1.13.2.

Effects of water retention:

The only staff gauge in the area is just above the junction of Channel XX. and Channel XX. "árapasztó", cca. 7 km from the SR along Channel XX. Regarding the Dabas Turjános NCA, the closest staff gauge is cca. 4 km from the target site. For these reasons we did not collected any data on the present hydrology of the area. However, regular visual observations and geodesic data confirmed the need of water management objects.
For detailed data see table on CD, in Annex 5.1.13.2.

Biodiversity monitoring:

To assess the effects of conservation management the special knowledge on other taxa was also required. For this reason we hired three researchers (in April, 2012): Mr Ottó Merkl, specialist of taxon **Coleoptera**, Mr Gergely Petrányi, specialist of **Lepidoptera** and Mr Gergely Szövényi, specialist of **Orthoptera** to carry out the basic state survey on these taxa, connected to designated sampling plots. For Coleoptera and Lepidoptera, elimination of invasive species, change of forest naturalness and structural development of potential habitats of viper; for Orthoptera, elimination of invasive species and structural development of potential habitats of viper supported the management monitoring. (Photos are attached in 1MTR Annex 5.1.13.-7,8 for the research reports see 1PR Annex 5.1.25.-2.)

These surveys were repeated and conclusions drawn in the planned last year of the project, in 2015. (The research reports can be found in Annex 5.1.13.4-5. on CD.)

The comparison of the results of the 'before' and 'after' reports show that the time passed after the management is too short to indicate the significant change of the Orthoptera or Coleoptera fauna. Sadly, 2012 and 2015 were both very dry years which altered the sampling significantly. However, some trends can be clearly seen: for instance, the Orthoptera fauna of the sampling sites, where the common milkweed was removed, significantly improved and the species characteristic for sand grasslands returned. It was also documented that the fauna devastated in the wildfire of 2013 can only return very slowly to its former habitats.

The research report on Lepidoptera was submitted in the frame of biodiversity monitoring in December, 2016. As this research concerned the final stage of the project the 'before management' and 'after management' data were evaluated. It revealed that the habitat management largely contributed to the diversity and quantities of the Lepidoptera fauna of the project area. Compared to the data of 2012, the number of butterfly and moth species (including protected species of these taxa) increased. The density of the Lepidoptera specimens (occurrence density, probability) also increased considerably. The report contains habitat management recommendations for Natura 2000, protected or rare Lepidoptera species. (For research report see Annex 5.1.13.6. on CD.)

In the biodiversity monitoring, other specialists of DINPD were drawn in (no personnel costs were budgeted for them).

Hungarian meadow viper was the flagship species of our project. As many of our conservation management actions aimed the improvement of its habitat, it was essential to have information on its population in the area. For this reason we carried out viper monitoring, according to the recommendations of the project team of CONVIPURS project. In 2013 we found 3 adult viper individuals and 2 offspring altogether. (These were the first specimens seen here after 2009!) See Annex 5.1.13.-7. The monitoring continued until 2018 in other areas, although, with less success.

The results of the monitoring of the Natura 2000 habitats and **protected species** could justify that our conservation management actions were adequate. However, due to the variety of protected species (many of which needed specialists to identify) and their enormous specimen numbers in our project area, it was impossible to carry out with our personnel capacity. Despite the above mentioned fact, we took the opportunity to recruit professional staff to collect data on many occasions (e.g. inviting DINPD specialists or whole departments to the project area, and WWF once (see Annex 5.1.13.-8. for photos).

The number of data collected on species during the project is quite high (ten times the 3000 GIS data proposed in our application): 30,552 (see the map in Annex 5.1.13.-8.)

We also started a capture-recapture research on the **Hungarian ground beetle** (*Carabus hungaricus*) population of the SR in Autumn, 2013. The survey ended in Autumn, 2018. This Natura 2000 priority and strictly protected species is supposed to have the largest populations in Hungary here. The important results of the survey are summarised in English in the abstract of the Rosalia volume in article 'Does experimental design affect population parameter estimates of *Carabus hungaricus*? A case study of a long-term mark-recapture methodology in Táborfalva'. (See abstract in Annex 5.1.13.9. on CD and also photos here.)
For *Carabus hungaricus* dispersal and habitat requirements, biotic and abiotic factors affecting movement activity in a short-time period are not well known. We used radio telemetry (first time in Hungary for beetles) to track this species in Táborfalva SR, in October 2017, with 10 individuals, five males and five females, equipped by 0.3 g transmitters, for 7 days. For the results see the abstract in Annex 5.1.13.9. on CD. See also photos in the same place.

We also studied the genetic variability of this species. Of the five markers that have been shown to be polymorphic to *Carabus hungaricus* so far, 4 have been found to be polymorphic in the Táborfalva population, making them appear to be most useful in population genetic studies. Our results continue to support the fact that markers developed for other species may also work for *Carabus hungaricus*. For the description of results see abstract in Annex 5.1.13.9. on CD. All the knowledge gained is very important for drawing conservation measures regarding this strictly protected species.

Herpes porcellus is one of the 6 protected Curculionidae species in Hungary. During the project years the distribution map in Hungary was elaborated for this secretive species, which is rare throughout Europe. Its lifestyle and host plants were observed as well, increasing highly the information on these beetle and enabling us to protect it more effectively. The main site of the research was the SR. For the article on the results see Annex 5.1.13.10. on CD.

We placed out also 14 nest boxes for the **European roller** in spring with the help of BirdLife Hungary, Budapest Division, 19 nest boxes for **red-footed falcon** and one nest tray for the **saker falcon** in autumn, 2014. (See 1MTR Annex 5.1.13.-17.) The perished nest of our **white-tailed eagle** was also renewed. (See Annex 5.1.13.11.) The experts of HELICON LIFE visited the surroundings of the viper habitat on 25.11.2014 as a suspicious raptor corpse was found there (unfortunately there was a poisoning case near the project site in November, 2013 which affected 3 eagles, 2 of them died). (For a photo see Annex 5.1.13.11.)

Next boxes were placed for **barn owl** (5 pcs) and **little owl** (5 pcs) on 22.09.2017. (For photos see Annex 5.1.13.12.)

From 2013, with the help of our project and BirdLifeHungary, Budapest Division, the monitoring of **Montagu's harrier** launched. As a result, it revealed that the population of the SR is among the largest ones in Hungary. For this reason, it is very important to monitor the effect of the management of the leased grasslands (of Action C5) on this valuable bird population of the region. For the research report and a photo see Annex 5.1.13.13. on CD.

On the project site, a breeding pair of **short-toed eagle** was discovered during the project. Buffer zones were also designated for limiting forestry works endangering the successful breeding. In order to monitoring this species and its possible prey the Hungarian meadow viper a nest camera system and two GPS loggers had been purchased after discussing it with the species coordinator.

After setting up the camera system in March 2017, several nest visits were recorded but the breeding pair did eventually did not use the nest neither in 2017 nor in the following years.

A previously rehabilitated second calendar year short-toed eagle was GPS tagged and released at the project site. Unfortunately the bird named "Pühők" died in Poland after 3 month of wandering. The detailed case study was published in Heliaca 2016, the Hungarian Raptor Protection journal:
http://www.mme.hu/binary_uploads/2_magunkrol/heliaca/heliaca_2016_online.pdf

Trials of tagging adult birds did not succeeded but the first juvenile short-toed eagle was GPS tagged in the project area. The bird named Örs migrated through the Bosporus to Saudi Arabia in its first winter, came back to Turkey for the summer and then migrated to Sudan, Africa in his second winter. His track can be followed here: http://satellitetracking.eu/inds/showmap/?check_334=334

Photos on the activity can be found in Annex 5.1.13.14.

In 2017, two other taxa was surveyed, of which we had rather low data numbers:

The research on small mammals was carried out by expert Mr Tamás Cserkész. conservation management measures were formulated to protect our species. Unfortunately, prominent species *Sicista trizona* did not appear. (Please see Annex 5.1.13.15. on CD.)

The research on the snails of our project area was carried out by expert Mr András Varga. The results were also included in a Rosalia article and conservation management measures were formulated to protect our rare or protected Mollusca species. (Please see Annex 5.1.13.16. on CD.)

When we tried to formulate conservation measures to certain habitats or species, we often faced the lack of information on the landscape history of our area. That is why it is proved to be inevitable that in 2018, the landscape history of our project area was compiled. The study was very well welcomed also by the local and national experts of landscape history and local history. The nice and thorough document can be downloaded also from the project website: http://turjanvidek.hu/media/statikus/Turjanvidek_N2000_del_tajtortenet_MolnarAP_2019_final.pdf Please see in Annex 5.1.13.17. on CD.

On 15.06.2013. fire set out in the SR during a military training (out of the live fire area) and destroyed cca. 240 ha priority habitats and vast amounts of protected species. For photos see 1MTR Annex 5.1.13.-20,21,22.)

The serious conservation value damaging case was reported to the European Union through MoA. Connected to the incident, there were grave conclusions drawn about the necessity of observing the CMP, the need of immediate action, the essential dialog between military and conservation, the cooperation with fire service, etc. It was the DINPD field coordinator, who played the main role in fire fighting, listing the damages and in further negotiations. (For the minutes of the negotiations with military see 1MTR Annex 5.1.13.-23. on CD) As a consequence of the sad case, the fire fighting plan of the SR was supervised and became more strict. It revealed that there must be further actions made to prevent similar cases (e.g. grazing was introduced even in the live fire shooting range – not as a part of the project). Water retention (Action A2, C4) also plays an important role in decreasing the number and extent of fire cases. Potential fire tracts were designated with the joint cooperation of MoD DEB, DINPD and BFC, which are ploughed up only when serious fire emerges – not as a part of the project. Please see Annex 5.1.3.18. and minutes on CD.

(Answer to Point 8. in Ref. Ares (2017) 4141761-23/08/2017: LIFE and Natura 2000 logos are displayed on reports and English summaries are available).

Outputs (DINPD):

direct indicators for management actions C1, C2, C5

direct indicators for communication actions D1-D9, D11

management monitoring data series for 32 sample areas

3 biodiversity monitoring summaries

30,552 GIS data records
Time schedule: deadline 30.09.2018.
Problems: no
Modifications: no

Outputs (DINPD):

direct indicators for management actions C1, C2, C5

direct indicators for communication actions D1-D9, D11

management monitoring data series for 32 sample areas

3 biodiversity monitoring summaries

30,552 GIS data records

5.1.14. ACTION E.3.: After-LIFE conservation management plan
Action status: completed
Responsible partner: DINPD
Time schedule: deadline 30.09.2018.
Problems: no
Modifications: no
Please see Annex 5.1.14.

5.2 Dissemination actions

5.2.1 Objectives

In our proposal, there was no dissemination plan set, but we created a communication plan at the beginning of the project implementation, in which we set different communication objectives and planned to use different tools for the different target groups of the dissemination activities.

The target groups were identified and classified in 4 groups:

- Military users of the SR from all across the country (and abroad)
- Professionals (conservation managers, researchers, forestry practitioners, water managers, authorities, land users) on the national level, broaden to the neighbouring countries regarding conservation professionals
- Local municipalities and inhabitants (both adults and children) of the neighbouring settlements of the project site
- Wider public nationwide, interested in environmental topics (mainly internet users)

Objectives and tools per target groups:

Target group	Objectives	Tools (Actions)
Military users	- Awareness raising on the project and increasing knowledge on the natural values of the SR - Reconciliation of the interests of the military users and nature cons. - Involvement in the cons. management and monitoring of the SR	- Website (D1) - Information boards (D3) - Project brochure (D4) - Revised management plan, mobile application, DVD and trainings for the military users (D6) - Articles in specialized media and project film (D7) - Layman's report (D10)
Profession-	- Presentation of the project results	- Website (D1)

als	and supporting the capitalization on them - Exchange of experience on cons. activity in military sites and on invasive control practices	- Participation on scientific conferences (D8) - Monograph on research and cons. management of the Turjánvidék (D9) - Workshops on invasive control (D9) - Networking with other projects (D11)
Locals	- Awareness raising on the project and the natural values of the SR - Increasing sensitivity to nature cons. - Reducing unauthorized access to the project site	- Website (D1) - Information boards (D3) - Project brochure (D4) - Green Days for schools (D5) - Articles in local media and project film (D7) - Publication on invasive plants (D9) - Layman's report (D10)
Wider public	- Awareness raising on nature cons. - Increase knowledge on the Turjánvidék and on the project achievements	- Website (D1) - Project brochure (D4) - Media work and project film (D7) - Cincér newsletter and WWF Magazine (D7) - Publication on invasive plants (D9) - Layman's report (D10)

5.2.2 Dissemination: overview per activity

5.2.2.1. ACTION D.1: Information to the general public – website operation

Action status: completed
Responsible partner: WWF
Description of the results:

- We launched the project website in two languages, www.turjanvidek.hu on 03.07.2012. We regularly upload news on what happened in the project and we pay special attention to update the English version of the website as well. All project publications are available for download (http://turjanvidek.hu/?/news/downloads). We made available the electronic version of the reports as well. The presentations of the seminars on invasive species and the project film are also published on the website. (For printscreens see Annex 5.2.2.1.3. and 5.2.2.1.4.)
- We promoted the website through the social media, the publications, the promotional material, project presentations on conferences and through the media activity.
- We used and continue to use the website for communication to the military troops who use the SR. The training material developed for them (ppt presentation) is also available through the website, and a list of valuable or protected species was also created for them.
- We consider the on-line communication effective. The website has been filled and regularly updated with both general public and expert contents, and it has generated higher interest than planned. The total number of visits was from 2012 through 2017 76,970, which exceeded the expected 10,000 (for statistics, see Annex 5.2.2.1.1. on CD). The statistics were created by Webalizer version 2.23. At the end of 2017, the web hosting company quit the contract with Webalizer, and set up a Google Analytics account for our website (for 2018 statistics see Annex 5.2.2.1.2).
- The website with all the content will be maintained during the After-LIFE period, and updated with relevant news.

Outputs:

- An up-to date website in Hungarian and English with news, contact e-mail address, downloads, links
- Knowledge base on the practical experiences in invasive plant elimination, including videos, PPTs and publications are available in the Download section
- Total number of website visits was 78,954 during the project

Problems: no
Modifications: no

5.2.2.2. ACTION D.2: Creation of project brand

Action status: completed

Responsible partner: WWF

Description of the results:

- The project logo and the brand applied for the website, for the info boards, for the publications and most of the presentations were created at the beginning by a graphic designer. For HUTURJAN project logo see Annex 5.2.2.2.1.
- We produced our first promotional materials 2012 and 2013, for different target groups:
  For children: lighting key holder with solar collector in 1000 pcs, colouring pencil sets in 500 pcs.
  For military users and the media representatives and professionals: 700 pcs of copybooks with pens, 150 pcs of military/camping spoon sets, 500 pcs of water-bottles, 1000 pcs of coasters.
- A second set of promotional material was produced during 2017, when the original stock already ran out. This time we produced:193 pcs textile bags, 130 pcs cooler bags, 240 pcs pendrives, 115 pcs umbrellas, 60 pcs T-shirts with Montagu's harrier graphics.

- In total we produced 4588 promotional objects. For photos of the objects see Annex 5.2.2.2.2. and 5.2.2.2.3. Most of the objects were distributed on the press conferences to the media, on the invasive seminars, through the Táborfalva Base and the Ministry of Defence to the military users and for children on excursions held. The rest of the material was distributed among the partners in order to use them on their events and give them to their professional contacts. Updated distribution list is attached in Annex 5.2.2.2.4. on CD.
- The promotional materials fulfilled their purpose well, as the different objects were popular among the different target groups.

Outputs:

- Nice and consistent logo and visual brand created for the project
- 4588 pieces of different promotional material with project logo and LIFE logo created and distributed

Problems: no

Modifications: We produced and distributed somewhat more promotional objects than planned.

5.2.2.3. ACTION D.3: Setting up information boards

Action status: completed

Responsible partner: WWF, DINPD

Description of the results:

- 8 information boards on the HUTURJAN project, LIFE fund and Natura 2000 network are set up. We have ones in Hungarian erected in frequently visited locations of Táborfalva, Örkény, Tatárszentgyörgy and Dabas settlements. 1 Hungarian infoboard was also put by the entrance of the Dabas Turjános NCA, and 1 at the beginning of the Betyár-domb study trail, which is the only one route open for hikers within the military area. By the Táborfalva Military Base and the entrance of the Central Shooting Range two-language infoboards were set up, as foreign soldiers were also taken into consideration. The Betyár-domb study trail board was erected in 2017, so its content was slightly updated (for text image see Annex 5.2.2.3.2.)
  For the English text of the infoboards see Annex 5.2.2.3.1. For the infoboard in Táborfalva and Dabas NCA see Annex 5.2.2.3.4.,7, for the others see Annex 5.2.2.3.-3,5,6,8, 9, 10 on CD. For the coordinates of the boards see Annex 5.2.2.3.16. on CD.
- 20 pcs Natura 2000 boards were placed along the border of the Turjánvidék Natura 2000 site southern unit (for photos please see Annex 5.2.2.3-11, 12.)
- Supplementary warning signs with LIFE stickers were also put on the roads crossing the border of the SR, a lot of them in three (Hungarian, English, German) languages to prevent the unauthorised members from entering the valuable and sensitive habitats. (These sites are threatened by motocross and quad use, illegal collection activities of amateur foreign entomologists, waste deposition, etc.) For the signs please Annex 5.2.2.3.13-14.
- The information boards and the warning signs are at visible places and help to raise attention of the local people on the values of the territory on one hand, and the rules and restrictions that apply on the other.

- **Outputs:**
  - 8 information boards set up
  - 20 Natura 2000 demarcation boards set up
  - 81 supplementary warning signs set up
- **Problems:** Due to vandalism, some of our warning signs were damaged or stolen and had to be replaced (Annex 5.2.2.3.15. on CD)

Modifications: We set up more information boards than planned.

5.2.2.4. ACTION D.4: Compilation of project brochure

Action status: completed

Responsible partner: WWF

Description of the results:

- The project brochure was issued in 2000 pcs (1500 Hungarian, 500 English) in 2012. For the leaflet in Hungarian and English please see Annex 5.2.2.4.-1,2. As it was distributed soon to the contacts of the partners, to military bodies, local governments near the project site, schools, etc., a second edition was needed (1000 pcs in Hungarian, 500 pcs in English). For the distribution list please see Annex 5.2.2.4.3.on CD. The leaflet is uploaded to the project website in both languages:
- http://turjanvidek.hu/media/statikus/wwf%20leporello%20uj3.pdf
- http://turjanvidek.hu/media/statikus/wwf%20leporello%20angol.pdf
- The leaflet was distributed to the media, to schools and public institutions in the region, to the military users, to the domestic and international expert community, and to interested public through the general channels of the partnership until the other results of the project were published.

Outputs:

- 3500 project brochures were issued and distributed (printed on recycled paper)

Problems: no

Modifications: The format of the leaflet was changed to A5 size landscape, and the number of copies printed was raised to 3500.

5.2.2.5. ACTION D.5: 'Green Days' on Táborfalva Military Shooting Range

Action status: completed

Responsible partner: WWF

Description of the results:

- We organised several guided tours for the locals and other interested people to the Betyár-domb study trail at the edge of the SR, which is the only route that can be freely and safely visited within the military area (no entry permit needed and there is no hazard of intact ammunition there). The dates and participants of our guided tours were:
    1. 05.10.2012 – 40 pupils (from 3rd and 4th grade) of the Csurgay Franciska Primary School of Táborfalva (See a photo in Annex 5.2.2.5.-1.).
    2. 16.09.2013 – pupils of the primary school of Tatárszentgyörgy (4 classes of 3rd and 4th grade). (A photo see Annex 5.2.2.5.-2.)
    3. 14.05.2015 – 5th grade students of Huszka Hermina Általános iskola in Örkény. To this excursion the film makers accompanied the group and scenes of the trip are part of the project film.
    4. 13.06.2016 – a group from Bóbita Kindergarten from Dabas (24 children and their teachers). (A photo is in 2 PR Annex 5.1.17.1.)
    5. 28.09.2016 – a group of young adults from Budapest, supporters of nature conservation. (Photo is in 2 PR Annex 5.1.17.2)
    6. 14.05.2017 – approx. 40 participants on the nature tour with guide to the Dabas Turjános NCA to see the blossoming of the orchids (see a photo in Annex 5.2.2.5.-4).
    7. 21.05.2017 – an active green community (35 people from Törökszentmiklós) visited the nature trail and the Hungarian Meadow Viper Centre on the Earth Day (for photos see Annex 5.2.2.5.-5,6).
- We had two jigsaws made with the characteristic protected species of our project area and one (three in one) memory-jigsaws-colouring sheet game was also purchased and used to popularize our conservation values in the region and in Hungary. (The photo in Annex 5.2.2.5.-3. was taken at Tata Wild Geese Festival, in November, 2013).
- Using the existing nature trail at the edge of the SR plus other events proved to be a feasible, effective and well received by the target group solution for taking people close to the project site, which is not accessible due to life hazard.
- The nature trail, which can be freely visited is advertised also on our website: http://turjanvidek.hu/?/tanosveny

- **Outputs:**
- 7 Green Days on Táborfalva Military SR and Dabas Turjános NCA
- Approx. 230 participants in total
- **Problems:** no
- **Modifications:** In the proposal we planned to organize open days to the SR connected to 'Green Days' but it became clear at the beginning of the project that it is not safe and not feasible to take civilians to the actively used military area. That is why we developed the above solution.

5.2.2.6. ACTION D.6: Nature conservation training for military users and environmental officers

Action status: completed

Responsible partner: DINPD, WWF, MoD DEB

Description of the results:

- Bakony Combat Centre that operates in Táborfalva Military Base is not a project partner (our partner is MoD DEB, which is a ministry organisation), so it needed time to create the communication channels. To contact all the military users was also difficult as the troops which train in the SR are stationed in different, remote parts of Hungary. For these reasons, our field coordinator, Mr Verő needed numerous days for gathering information and fieldwork, data procession to be able to update the CMP. The adaptation of the CMP required detailed negotiations with the military users as well. After Mr Verő left DINPD (who had the expertise in this topic), we had serious problems to carry on with this action. For these reasons this action was delayed, but completed by the end of the project.

The tasks within this action were:

- ***Updating the CMP (CD-ROM, pocket card):***

(This action part was closely connected to the training of the military users (see below).

- We have to mention the following important events regarding the compilation of the updated CMP:
- *Name:* ***Meeting with the military training officers***
- *Topic:* presentation of conservation basics and HUTURJAN LIFE+ project, updating the management plan of SR
- *Date and place:* 15.05.2013; Táborfalva
- *Participants:* Mr György Verő – field coordinator, Ms Annamária Csóka – project manager, Ms Rita Gyovai-Balogh – head of department (MoD DEO), Ms Katalin Kovácsné Parádi – project coordinator (MoD DEO), Attila Vécsei - information technology officer (MoD DEO)
- *Messages delivered:* In the presentations the basic concept and definitions of conservation, the natural values of Turjánvidék Natura 2000 site southern unit and HUTURJAN LIFE+ project were presented. There was also a field trip to the sand habitats of the training area, where we discussed the potential conflict points of conservation and military – connected to the updating of the CMP of the SR. One of the main points of the meeting was to present our water retention plans, see in Action A2). For a photo see Annex 5.2.2.6.-1 and for the list of participants 1PR Annex 5.1.18.-7.

As a result, in January, 2014, a detailed questionnaire was compiled by Mr Verő and was sent out through MoD DEB to all the military bodies using Táborfalva SR. In this document DINPD asked for information on those characteristics of military activities, which interest us from the viewpoint of conservation. (As conservation experts are not allowed to enter the SR while military trainings take place, we knew almost nothing what the activities going on the habitats look like). As a basis for the CMP, the area of the SR was divided into zones based on their present military use. The main conflict points between the conservation and military proved to be the following factors: offroad vehicle traffic, soil disturbance and fire. See Annex 5.2.2.6.-2 on CD for the questionnaire and further explanations on 1 MTR CD.

To have a picture on the military trainings, DINPD staff visited also a live fire training on 09.04.2014. For photos on the occasion see 1MTR Annex 5.2.2.6.-3,4.

The next step in updating the CMP was the following event:

- *Name:* ***Negotiation with the military users on CMP***
- *Topic:* updating the CMP of the SR
- *Date and place:* 12.03.2014; Székesfehérvár
- Audience: 19
- *Participants:* Mr György Verő – field coordinator, Ms Annamária Csóka – project manager, Ms Rita Gyovai-Balogh – head of department (MoD DEO), Attila Vécsei - information technology officer (MoD DEO)
- On the basis of this all-day negotiation our complex zone system in the CMP was further developed. From Zone No.1 to Zone No. 11. the number of conservation requirements is increasing. (For instance Zone No. 1 is the area of the military bases with hardly any conservation restrictions and Zone No. 11. contains habitats of sensitive, strictly protected species). For the zones see Annex 5.2.2.6.-3. For the minutes please see 1MTR Annex 5.2.2.6.-6. for a photo on the occasion Annex 5.2.2.6.-4.

The next important occasion was:

- *Name:* ***Negotiation with the military users on CMP***
- *Topic:* presentation of conservation basics and HUTURJAN LIFE+ project, update of CMP
- *Date and place:* 18.11.2014; Székesfehérvár
- Audience: 19
- *Participants:* Mr György Verő – field coordinator, Ms Annamária Csóka – project manager, Ms Rita Gyovai-Balogh – head of department (MoD DEO), Attila Vécsei - information technology officer (MoD DEO)
- *Messages delivered:* In the presentations the basic concept and definitions of conservation, the importance of the Natura 2000 network and the protected species in the Táborfalva SR and the current version of the CMP of Táborfalva SR were presented and the zone system was further developed.
- For a photo on the occasion see Annex 5.2.2.6.-5. for the list of participants see 1MTR Annex 5.2.2.6.-11.

- *Name:* ***Negotiation with the military users on CMP***
- *Topic:* presentation of conservation basics and HUTURJAN LIFE+ project, update of CMP
- *Date and place:* 02.12.2015.; Székesfehérvár
- Audience: 18
- *Participants:* Mr György Verő – field coordinator, Ms Annamária Csóka – project manager, Ms Zsófia Dukát – head of department (DINPD) Mr Attila Vécsei – head of department (MoD DEB), Eszter Forgács – project coordinator (MoD DEB)
- *Messages delivered:* Basic concept and definitions of conservation, the importance of the Natura 2000 network and the protected habitats/species in the Táborfalva SR and the almost final version of the CMP were presented
- On the basis of this all-day negotiation our complex zone system in the CMP was simplified and finalised. 9 zones remained and larger blocks were developed to be easily observed in field. From Zone No.1 to Zone No. 9. the number of conservation requirements is increasing. (For instance Zone No. 1 is the area of the military bases with hardly any conservation restrictions and Zone No. 9. contains habitats of sensitive, strictly protected species.)

- For the list of participants on the occasion see Annex 5.2.2.6.-6. on CD.

For the zone map see Annex 5.2.2.6.-7.

In 2016 and 2017 in negotiations the zone map was further simplified, to be effectively applicable for the military users. For the final version of the zone map, and its description please see Annex 5.2.2.6-8.
The approval of the CMP by the leaders of Hungarian Army can be found in Annex 5.2.2.6-9.
The CMP is incorporated in the SR regulations until the end of 2019. For further details see 'Problems'.

As the third part of the training material for the military, the CMP was written on 50 pcs CDs and was distributed to the user corps of the SR.
To gain exact information on the effect of the military use on the natural habitats, populations, middle and long-term surveys and monitoring programs have to be set – as a base of the future supervision and modification of the CMP.

As technology developed since the time the project was compiled, instead of the military field card, a mobile application was developed for Android and iOS phones and tablets, with the possibility of downloading (secured by password) from Google Play or Apple App Stores. The application visualizes the zones of the SR (Google Maps based) and displays the regulations regarding each zone. The recognition of the zones is based on GPS information and it operates also off-line, both in the field and outside the area. The application is available in Hungarian and in English. It was used in test mode from the end of September, 2018 and further suggestions have been already accepted. The application can be downloaded from:
https://play.google.com/store/apps/details?id=dinpi.loter.raabdigital
(Password is given only to the military users, through MoD DEB.)
Without a password, an informative description is freely available. The app can be searched and found also using the key words 'Táborfalva', 'Táborfalvai lőtér'.
We developed a mobile app for military purpose for the first time in Hungary.

Training of the military users of the SR:
As a part of our conservational training program, two posters – in Hungarian and English languages – were compiled for the Hungarian and foreign troops using the SR to show the natural values of the live fire SR and the aims of our LIFE project. These are displayed in one of the control buildings of the SR. (Please see the Hungarian version poster in Annex 5.2.2.6-10. on CD.)

– We held more meetings, presentations, trainings for the military users of the SR, only the most important are indicated in *Updating the CMP (CD-ROM, pocket card),* see beyond (as the negotiations on CMP were trainings to the military users at the same time), for the others, see Annex 5.2.2.6.15. on CD.

As a result of the fast technical development since the proposal was approved, CD-Roms have become less widely used as before. Therefore the training material instead of a CD-Rom was created to be available online (first part), and through an application (the zone map). However as a complement to the training material, the project film (produced in Action D.7) was published on DVD and distributed to the military units that use the SR, in 110 pcs.

Parts of the training material:
1. An overall presentation as introduction to conservation and environmental protection (general issues, definitions, conservation and environmental problems, case studies, etc.) –

compiled by Mr. László Gálhidy (see Annex 5.2.2.6.-11 on CD). Available on our website, see: http://turjanvidek.hu/media/statikus/turjan_life_katonai_kepzesi_anyag_1.pdf
2. Description of special (local) conservation topics (Natura 2000 in the SR, special habitats and species, etc.) Information is available on our project website, e.g.
http://turjanvidek.hu/?/erintett_terulet/elovilaga
http://turjanvidek.hu/?/erintett_terulet/vedett_fajok

In addition, two more SR specific presentations are available here:
http://turjanvidek.hu/media/statikus/eloadas_katonai_hasznaloknak_2.pdf
http://turjanvidek.hu/media/statikus/eloadas_katonai_hasznaloknak_3.pdf
See also Annexes 5.2.2.6.-13-14 on CD.
+ Project film on DVD (for disc picture see Annex 5.2.2.6.-12 on CD, for the complete film see annexes of Action D.7)
3. Zone map and its description regarding the SR
Available only for the military users and protected by a password at: https://play.google.com/store/apps/details?id=dinpi.loter.raabdigital

Field data collection and GIS exchange:
On 04.07.2014 a workstation started to operate at Táborfalva Base with QGIS database and the biotic data on the SR (for a photo see 1MTR Annex 4.2.2.). Here, the internet service was also provided by your project from October, 2014.)

- The data collection for updating the CMP for the SR is continuous. Up-to-date field data was sent to the MoD DEB. 2651 species data was collected by participants of the military sector, with the guidance of DINPD. (Answer to Point 3. in Ref. Ares (2017) 4141761-23/08/2017). (See Annex 5.2.2.6.-16.)

Within this action the ultimate goal is to create the framework for a fruitful, long-lasting bi-lateral cooperation between the military users and nature conservation on the SR. For that reason we have chosen an approach based on engagement and win-win consensus, which takes more time and effort to create than delivering one-way communication actions (training, CD-ROM). However, we are convinced that this approach will pay back in the long run, and CMP commonly agreed through iterative talks will fulfil its conservation purpose the best.
During the joint revision of the CMP the military users have been learning the basic principles and needs of nature conservation on the SR. Besides the expert dialogue, the over-achieved field data collection activity with the involvement of the troops and the training field trips in both contributed to the awareness raising and capacity building of the military officers.

- **Time schedule:**
- proposed deadline: 31.08.2016.
- actual deadline:30.09.2018.
- compilation of the updated CMP: 31.08.2018.
- development of the application: 30.09.2018.
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-
- **Outputs (DINPD, MoD DEB):**
- presentation: introduction to conservation and environmental protection – on website**;** Natura 2000 habitats, species of SR - on website
- Workstation and GIS equipment for the Táborfalva military base
- 3 trainings and 2 field trip with military users for practical training
- 2651 GIS data on protected species collected by the military users – in DINPD database
- mobile application
  Field marker pyramids at zone boundaries – *not implemented*
- **Problems:** yes

As the CMP was deeply negotiated with the military users, we were waiting for the official acceptance of the high ranked officials of the Hungarian Army in charge of the training tasks. However, the CMP was not approved. The explanation was that there are plans for the development of the Táborfalva SR in the frame of the newly emerged, intensive Zrínyi Army Development Program (until 2026) and these plans cannot be completely in line with the conservation rules set in our project in CMP. (This was a totally new piece of news for the project beneficiary and conservation manager of the area.) The military users of the SR aim to increase the number of troops and combat equipment with an order of magnitude, which means a much more intensive use of the SR. For clarifying this serious situation, a negotiation was summoned, on the basis of which the present CMP of the SR was accepted and incorporated into the SR rules until the end of 2019. There is an environmental impact assessment procedure on the Natura 2000 site going on regarding the SR development and further field trips and negotiations are needed to estimate the effects on the natural values. For the minutes of the negotiation in October, 2018, see Annex 5.2.2.6.-17
The main changes planned by the Hungarian Army are illustrated in zone map in Annex 5.2.2.6.-18.
The transfer of certain areas are planned into lower number zones, which mean lower conservational guarantees:
Area labelled I.: from zone7 to zone6
II.: from zone7 to zone2

III.: from zone3 to zone2
IV.: from zone8 to zone2
V: from zone4 to zone2
VI. from zone7 to zone6
VII. from zone7 to zone2
VIII. from zone8 to zone5
Letters A and B have no relevance on the map.

Consequences for other actions: no
Modifications: mobile application instead of a field card

5.2.2.7. ACTION D.7: Information to the general public - Media work

Action status: completed

Responsible partner: WWF

Description of the results:

- We held a thematic workshop at the beginning of the (03.04.2012.) and as a result the five-year communication plan of HUTURJAN project was compiled (submitted as IR Annex 5.1.19-2). Media work was led and coordinated by WWF and all partners contributed to it.
- Media activities were carried out continuously from the beginning to the end of the project, via different media, including local, regional, national, international press and social media. We also used the regular publications of the partners to inform their followers, e.g. Herald Cincér, the DINPD quarterly newspaper, and WWF Magazine. We published on-line articles on the partners' own webpages, and on the websites of the local governments of the neighbouring settlements to the project site. In total 200 media clippings were registered. (For the complete and updated list and document please see Annex 5.2.2.7.1.-2 on CD.)
- We had two roll-ups prepared. (Compared to a poster, a roll-up is much more durable and can be easily transported.) One of these provides information about HUTURJAN project and will be used by all our project partners to advertise our program at conferences, meetings, etc. (For this roll-up see MTR1 Annex 5.2.2.7.-3.) The other roll-up displays the natural values of Turjánvidék Natura 2000 site southern unit, our project site, and Nagykőrösi pusztai tölgyesek Natura 2000 site, subject of another LIFE project of DINPD, which is completed. (The roll-up is shown in Annex 1PR 5.1.19.-4.) To inform also the foreign interested, the project roll-up was translated into English and a poster produced (please have a look at 1PR Annex 5.1.19-5.).

- We held 2 press conferences with field trip to the project site. The first one was on 20.06.2013 to show the initial status and start sensitizing the media. The programme attracted high interest of the media, altogether 30 journalists participated, plus high officials of the partners and the Hungarian Army. The press conference and the press release generated 30 clippings in the on-line and printed media and 2 television interviews. The invitation, the final programme, the press release, participants list are presented in 1MTR Annexes 5.2.2.7.-4-10. For photos see Annex 5.2.2.7.3.
- The 2nd press conference and field trip was organised to present the results at the end of the project, on 17.10.2017. This time 29 journalists participated, including a shooting team of the national public TV channels. (For the media invitation, the press release, and photos of the press trip see Annexes 5.2.2.7.4, 5, 7. and the registration sheet in Annexes 5.2.2.7.6. on CD.) In both cases, the organisation was done by WWF, with the support from the partners and the Táborfalva Military Base.
- Among the media clippings we consider important that we presented the project on TV 14 times, including the broadcast of the project film. For example Ozone TV created two long interviews about the project and broadcast them several times in their Egyenlítő programme. The first one was recorded in 2015 with Pál Kézdy from DINPD and Klára Kerpely from WWF, and the second was recorded in October 2018 with Rita Gyovai-Balogh from MoD, Zoltán Molnár from the Bakony Military Base and Klára Kerpely from WWF.
-
- The production of the project film was started in 2013 and the film was ready and on screen in 2017. To select the film maker company we asked different producers and

selected Natfilm Kft. on the basis of their previous works and the price offered. The film is 25 min long, as this is the usual length of nature documentaries in the Hungarian channels. During the production we released short spots 3 times. In April 2015 a 2-minute-long trailer was created, which was published on the project website and popularized in social media. The trailer was presented at a side event of an international nature film festival, held in May in Gödöllő, besides the official programme. In the spring two other short spots about animals of the SR were released in the on-line media, which created many clippings (included in the clipping list). All the 3 clips can be watched in News section of the website: http://turjanvidek.hu/?/news, and in the Gallery/Videos section.

- Obtaining the official permit for film shooting on the military area took several months, therefore the team could start to work on their own only at the beginning of 2014. (For the permit see MTR1 Annex 5.2.2.7.-13. on CD.) The military use of the SR was a limiting factor, since it is not permitted to enter the site when military activity is on-going. The only exception is when the military activity is filmed. (For photos on film shooting see MTR1 Annex 5.2.2.7.-14,15.) The film production was coordinated by WWF and Mr. György Verő, Ms. Annamária Csóka and Mr. József Molnár supported it on the field.
- Before publication all the videos were approved by the press office of the Ministry of Home Defence and Ministry of Agriculture. First broadcasts on TV happened in 2017, on public channels: M5 and Duna World (for printscreen of the channel programme see Annex 5.2.2.7.8. on CD). The film will be kept promoted after the end of the project, e.g. it will be broadcast on Ozone TV in 2019. It is available online on https://www.youtube.com/watch?v=X1KfbQLnm64&fbclid=IwAR1VGqUF4aKQXZ2uQI4-4rZPQp9k9jMj_aJ5vGfFQFF_P7XsXnEYWQkKLYQ and https://youtu.be/59RLzca1MZA and on the project site. (The film is attached on DVD)
- The film making professionals found the project site so interesting and valuable that they decided to create another, much longer nature documentary about it, and they managed to raise additional funds for it from the national fund for movie and television production. This 50 minute documentary makes credit to the project and the LIFE support as well.
- The project film presents the natural values of the SR in a very engaging way. That is why we decided to publish it on DVD as part of the military training material (see Action D.6). In total 110 copies were produced (100 with the project film and 10 with both films, including the longer nature documentary of Natfilm). The DVDs were distributed to the military users.
-
- Within this Action, we created an additional publication, a thematic issue of the regular WWF Magazine, which was used in the direct communication to the locals and the wider public. It was approved previously by the external monitor and the EC desk officer. The thematic issue, focused on the project site was published in 15,000 pcs, 1 full copy is attached to FR and in Annex 5.2.2.7.-16 on CD). Out of it 10,100 was directly distributed by post to all households in the 4 settlements around the SR.
- In the summer of 2015 the special issue of Cincér newsletter of DINPD was published in 5000 copies on 09.07.2015. and distributed by the partnership to schools, libraries, environmental education NGOs and individuals at different events. 1 full copy is attached to the FR. The PDF version is attached as Annex 5.2.2.7.10. on CD. The distribution list of the WWF Magazine and Cincér Herald is attached in Annex 5.2.2.7.11. on CD.
- The media interest for the natural treasures of the Táborfalva SR has been raised nation-wide through the media work. The media reach value of the clippings during the project has been over 7.5 million hits. The topic of nature conservation on military areas has been introduced to the green media agenda. Furthermore, people living in the nearby settlements

received specific publications about the project through the post and through local institutions.

- **Outputs:**
- wide media presence, increased interest on the issues targeted by the project
- 2 press conferences with press trips for the national media
- 2 roll-ups and 1 English poster
- a special issue of newsletter ‘Cincér’ on the project published in 5000 copies
- special issue of WWF Magazine published in 15,000 copies
- a 25 minute long film on ‘Turjánvidék’ Natura 2000 site, with 1 trailer and 2 spots
- press articles collected and filed in (200 pcs)
-
- **Problems:** Car accident of the cameraman caused some delay in filming, but it was overcome after he recovered.
- **Modifications:** One additional publication in 15,000 pieces was issued by WWF and distributed among the inhabitants of the 4 settlements. The duration of the film was changed from 15 to 25 minutes, a typical length at television channels.

5.2.2.8. ACTION D.8: Dissemination of scientific results of the project

Action status: completed

Responsible partner: DINPD

Description of the results:

- We noted that the scientific community was interested in the results of our project both within Hungary and outside the country. We also participated in events and we disseminated the information on our project on each occasion. The following topics generated the most interest: the control of IAS; the restoration and conservation practice in military areas, the flora and fauna of the Great Hungarian Plain, and the water retention interventions. The number of presentations/publications produced of our results exceeded the planned numbers. For the exact data on the events, see Annex 5.2.2.8-1.

Outputs:

- 21 conference, 41 participation
- Altogether 15 scientific publications and presentations

- **Problems:** no
- **Modifications:** no

5.2.2.9. ACTION D.9: Best practices in the defence against invasive species

Action status: completed

Responsible partner: WWF, DINPD

Description of the results:

- The first (national) seminar on invasive plant management in practice was held on 14-15. October, 2013 in Bugyi, near the project site. In the proposal we planned the participation of 30 experts, but the interest was so high that we decided to increase the event until the budget is not overspent. At the end, we received 98 registered participants. In the event representatives of LIFE projects dealing with invasive management, experts of all the 10 national park directorates, forestry companies, alien species specialists of universities, colleges and other scientific institutions participated. For participants list see Annex 5.2.2.9-1. on CD) All the presentations of the national invasive seminar are available on our project site: http://turjanvidek.hu/?/news/invasive_seminar
- The seminar was co-organised by another project of DINPD, „Özönnövények elleni egységes védelem homoki és ártéri élőhelyeken" Slovakian-Hungarian CBC (HUSK/1101/2.2.1/0052). In this project a small-scale experience exchange was planned on the same topic among the staff of DINPD and their Slovakian partners, and it was a good synergy option to upgrade the scale of knowledge to be shared.
- The international seminar on invasive management was held on the 19-21 April 2016, in Hotel Benczúr, Budapest. The workshop contributed to the on-going Biogeographic Seminar process of the Pannonian eco-region as an official follow-up event, approved by the Commission. For this reason, CEEWeb for Biodiversity became a co-organiser of the event.From 15 countries 134 registered experts participated, and 30 of them held a presentation on their experience regarding invasive plants. Also a representative from DG Env. Biodiversity Unit participated and held a presentation. For the scanned registration sheet see Annex 5.2.2.9.-2. on CD. The language of the event was English, with simultaneous translation into Hungarian. For the call for papers please see MTR2 Annex 5.2.2.9-1.
- The 3rd day we held a field trip to Szigeti homokok Natura 2000 site in Szigetmonostor (HUSK/1101/2.2.1/0052/01 - Suppressing invasive alien plant species on sand and floodplain habitat). There we could show similar habitats and interventions that are characteristic of the Turjánvidék project site. It was not possible to visit the project site because of the military security rules.
- At the end of the workshop the participants compiled a recommendation document for the European Commission to support the implementation of the Directive on IAS. The recommendations, the programme, the presentations, the posters, photos and the abstract booklet were attached in PR2 Annex 5.1.21.1.2-6., for abstract booklet, the final recommendations and final call see Annex 5.2.2.9.4,5, 11. on CD. For the final program see Annex 5.2.2.9.3. All the outcome, including the presentations recorded on video, are available on the website: http://turjanvidek.hu/?/invasive_plants_workshop/results

- Second, revised and expanded edition of 'Practical Experiences in Invasive Alien Plant Control' Rosalia Handbooks 3. was also issued in 2018 in 400 Hungarian and 100 English copies. (The first edition was issued in the frame of HUSK/1101/2.2.1/0052 project.) The content of this handbook was largely based on the presentations and authors gathered in our national IAS conference held in Bugyi in 2013 (see above). It contains various case studies and also summarizing articles on the practical management of the most dangerous IAS plant species in Hungary. The handbook was popular and we ran out of stock, and as the time passed there were new pieces of information on the IAS management topic as

well, that is why we decided to issue it again.) The handbook can be downloaded from here in Hungarian: http://www.dunaipoly.hu/uploads/2018-02/20180205132950-rosalia-kezikonyv-3-2nd-ed-net-compressed-cl1qjctb.pdf and in English: https://www.dunaipoly.hu/uploads/2018-01/20180124150851-rosalia-kezikony3-2nded-eng-net-compressed-tg7k48qu.pdf

- For the volumes see: Annex 5.2.2.9.-6, 7 on CD.
  The volumes were distributed through on-line IAS mailing lists as well. Where contacts and exact addresses were available, we sent printed manuals even abroad (e.g. EPPO Headquarters, GB Non-native Species Secretariat).

  Originally we planned a Rosalia volume that would have collected the information on IAS management. However, as a volume on this topic had been issued lately from a different project (the first edition of the above mentioned Rosalia Handbook 3.), we changed the topic and decided to form a volume about the conservation and research in Turjánvidék, as these information are of chief importance for drafting the conservation measures of the region.
- After thorough preparation work, the Turjánvidék Rosalia 10. volume was issued in 20.07.2018., under the name of *'Nature conservation and research in northern Turján Region'* The volume (collected studies) has 999 pages and contains 33 professional articles about the presentation of HUTURJAN project, landscape history, vegetation, flora, a great variety of zootaxa, conservation management, etc.
- The whole volume can be downloaded from here: http://www.dunaipoly.hu/uploads/2018-07/20180703152034-rosalia-10-honlapra-eml06tff.pdf (each article can be downloaded separately from the same place as well). The volume was widely distributed not only to the project partners and national park directorates but to other stakeholders, landusers working in Turjánvidék Natura 2000 site, to mayors of settlements, local libraries, university and college libraries, etc.
- The volume is available here: Annex 5.2.2.9.-9 on CD.
- For the dissemination list please see Annex 5.2.2.9.-8 on CD.

- The WWF invasive plant booklet was published in Hungarian, A5 format on 44 pages, in 12,000 copies (see Annex 5.2.2.9.-10. and attached a hard copy). Its content is general information on problems caused by invasive plants, and then it provides detailed information on the most common and most dangerous species in the Danube-Tisza Interfluve area, including eradication methods and proposed harmless species to replace them in gardens. To compile the content (text and photos) we contracted external experts of the invasive issue, and experts of WWF and DINPI contributed as editors and readers. Also for the graphic design and printing external assistance was contracted. The target group of the WWF booklet on invasive plants was modified to laymen, because since the submission of the proposal the situation changed. Several publications have been issued for the professional target groups, while there was a lack of information tailored to laymen; in spite they also have a significant impact on this problem. With the publication in this action we covered this gap. 9811 copies of the publication were distributed by the Hungarian Post to all households in the 4 settlements around the SR, and the rest is being distributed by the partners through events (distribution list is attached in Annex 5.2.2.9.-8 on CD.). It is also available on the website in PDF format.
- As a conclusion, we are convinced that our activities regarding the knowledge collection and leverage have met the needs of the conservation community in Hungary and within the EU. Our events generated higher interest and host larger audience than originally planned. Thanks to the introduction of the EU Directive the topic climbed up on the policy agenda

as well. For the most efficient use of EU resources the project built on the synergies with other on-going projects regarding this topic, like the HUSK/1101/2.2.1/0052 project. Apart from disseminating the collected best practice among professionals the project contributed to the awareness raising on this serious issue among laymen. The communication related to the WWF publication generated new partnership opportunities as well, for example one of the largest gardening retail chains (Oázis) approached us to promote this issue together to their customers.

Outputs (WWF, DINPD):

- 1 national experts' seminar, platform for sharing experiences on invasive species was held
- 1 international experts' forum, platform for sharing experiences was held
- Rosalia volume published in Hungarian with English abstracts, in 540 copies
- WWF publication on invasive plant species for laymen is published 12,000 copies in Hungarian
- Rosalia handbook on practical IAS management is reprinted in English and Hungarian in 500 copies

- **Problems:** no
- **Modifications:**
- Both expert seminars has been upgraded with more participants and more days since the interest among professionals is high and the topic offers large amount of experience to be exchanged.
- The target group of the WWF invasive plants booklet was modified to the wider public instead of the professional audience, because for them several specialised publications have been issued recently in other projects. Smaller format and higher number of copies were prepared.
- For the same reason, the topic of the Rosalia volume was changed to be a monograph on research and conservation management in the Turjánvidék instead of the practical manual on eradication and management.
- A handbook on eradication of invasive alien plants was published by DINPD in the HUSK/1101/2.2.1/0052 Hungarian-Slovakian CBC project in Hungarian and English. After the first edition ran out of stock and the demand remained high, a second edition of that manual was published by our project.

5.2.2.10. ACTION D.10: Compilation of the Layman's report

Action status: completed
Responsible partner: WWF
Description of the results:

- We compiled the Layman's report in A4 format on 24 pages, in Hungarian and English. The translation of the text was contracted to a professional technical translator. It presents the objectives and results of the project, actions implemented, lessons learned and the follow-up of the project in a style and depth suitable for laymen. It was prepared in 1000 copies (900 Hun, 100 Eng). Graphic design and printing was subcontracted.
- The brochure was published in September, 2018. Its distribution was started immediately and will be continued after the project. It has been and will be distributed mainly in events (i.e. Tatai Vadlúdsokadalom) and personally to selected professional target groups (such as the responsible Ministries, National Park Directorates, Nature Conservation Authorities, NGOs, military corps etc.). We stored some copies in both languages for future networking purposes. (Distribution list is attached in Annex 5.2.2.10-1).
- The Layman's report is available in PDF format on the website of the project as well (attached in Annex 5.2.2.10-2,3 and as hard copy in both languages).
-
- **Outputs (WWF):**
- 1000 copies of Layman's report in Hungarian and English (in A4 format, on recycled paper, full colour, text with photos and figures)
- **Problems:** no
- **Modifications:** no

5.2.2.11. ACTION D.11: Networking with other LIFE projects

Action status: completed
Responsible partner: DINPD
Description of the results achieved:

We were in contact with staff members of other LIFE projects, both in Hungary and abroad.
For exact data on the communication occasions during the reporting period see table in Annex 5.2.2.11-1. on CD.

As the overall duration of the project was prolonged, the deadline of this action should have been also modified, as obviously this is a task until the end of the project.
The prolongation of this action is not officially accepted (thus it is not illustrated in the timetable), however, it would have been very reasonable.

Outputs (DINPD):

exchanged experiences in the topic of invasive management, viper monitoring, military in conservation areas, communication, project administration, etc., with 12 projects altogether

- **Time schedule:** deadline: 30.09.2018.
- **Problems:** no
- **Modifications:** no

Results of D actions:
Regarding communication monitoring the indicator numbers are as follows:
 number of visitors of webpage: 78,954
 number of participants in project events: cca. 550 (the children of study trail programs were not asked to sign list of participants, so exact number cannot be calculated
 number of delivered publications: cca. 37,000
 number of distributed promotional material: 4458
 number of collected media clippings: 200

Photos were taken by Ms. Annamária Csóka, Mr. György Verő, Mr. Márton Árvay, Mr. Gábor Kovács, Mr. József Molnár, Ms. Eszter Forgács, Mr. Plivér Nagy, Ms. Klára Kerpely, Mr. Zsolt Nemes, Mr. Pál Kézdy, Mr. Zoltán Turny, Mr. Attila Vécsei, Mr. Gábor Papp, Ms. Éva Zanin
Photos on military can be publicized only with further permission from the Ministry of Defence, Press Office.

Photos on military can be publicized only with further permission from the Ministry of Defence, Press Office.
Maps were compiled by Mr. György Verő and Mr Márton Árvay.

Thanks to the project staff helping the compilation of this report and realizing the whole project.
We owe thanks to the representatives of the European Commission (esp. Mr. László Bécsy) and members of the external monitoring team (esp. Mr. András Kovács) for their help in smooth and flexible project implementation.

TIMETABLE

List all actions ordered by number and using their numbers or names. Tick as appropriate. (In the timetable the schedule accepted by the EC is in the first row by each action, the second row represents the realised timing.)

Action	2011		2012				2013				2014			
Number/name	September	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
A. Preparatory actions, elaboration of management plans and/or action plans :														
A1	✓	✓	✓				✓	✓	✓	✓	✓			✓
	✓	✓	✓				✓	✓	✓	✓	✓			✓
A2			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
A3	✓	✓	✓	✓										
		✓	✓	✓										
B. Purchase/lease of land and/or rights :														
B1	✓	✓	✓	✓										
		✓	✓	✓	✓									
C. Concrete conservation actions :														
C1					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C2									✓	✓	✓	✓	✓	✓
				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C3									✓	✓	✓	✓	✓	✓
								✓	✓	✓	✓	✓	✓	✓
C4									✓	✓	✓	✓	✓	✓
													✓	✓
C5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C6													✓	✓
C7					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C8					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
D. Public awareness and dissemination of results :														
D1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
D2	✓	✓	✓											
			✓	✓	✓	✓	✓	✓	✓					
D3	✓	✓	✓	✓	✓	✓								
			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
D4	✓	✓	✓	✓										

			✓	✓	✓	✓	✓							
D5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
D6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
D7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
D8											✓	✓	✓	✓
		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
D9									✓	✓	✓	✓	✓	✓
								✓	✓	✓	✓	✓	✓	✓
D10														
D11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E. Overall project operation and monitoring:														
E1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E2				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E3														

Action Number/name	2015				2016				2017				2018			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
A. Preparatory actions, elaboration of management plans and/or action plans :																
A1	✓			✓	✓											
	✓			✓	✓			✓	✓			✓	✓			
A2																
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
A3																
B. Purchase/lease of land and/or rights :																
B1																
C. Concrete conservation actions :																
C1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
C2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
C3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
C4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
C5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
C6		✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
										✓	✓	✓	✓	✓	✓	
C7	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	
C8																
	✓	✓									✓	✓				
D. Public awareness and dissemination of results :																
D1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
D2																
D3																
D4																
D5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						

D6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
D7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
D8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
D9	✓	✓	✓	✓	✓	✓							✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
D10					✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	
														✓	✓	
D11	✓	✓	✓	✓	✓	✓	✓						✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
E. Overall project operation and monitoring:																
E1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
E2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
E3					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
															✓	

DELIVERABLE PRODUCTS OF THE PROJECT

Name of the Deliverable	Code of the associated action	Deadline
Min. 4 newly employed persons for conservational tasks	E1	31.12.2011
Preparation of 4588 copies of different promotion materials	D2	30.04.2018
2 clearing saws with seed collection adapter	C5	31.03.2012
2000 copies of A4 format, full-colour brochures in Hungarian and English, printed on recycled paper	D4	10.11.2012
8 information boards set up	D3	31.12.2017
20 out placed boards of demarcation and further 10 items as replacement	D3	31.10.2012
Elaborated guide on conservation mangement monitoring and report on the habitat fundamental status	E2	31.12.2012
adaptation of the conservation management plan for land users and environmental officers	D6	02.12.2015
1 training CD-ROM for military users 150 pcs	D6	30.09.2018.
2000 pieces of laminated pocket cards in Hungarian and English	D6	31.05.2013

41 crossing gates	C7	31.07.2012
Research report of management monitoring of Actions C1, C2, C3 and C5	E2	31.12.2013
Dabas water management objects and 1 observation well for indicate groundwater table are built and have harmonized operation plan	C4	31.12.2017.
New forest management plan, that includes conservational interests that come off by the new habitat status that exist because of the project's actions	A1	31.03.2014
Research report of management monitoring of Actions C1, C2, C3 and C5	E2	31.12.2014
Water management objects and 2 fountains for indicate groundwater table are built in Táborfalva Military SA and have harmonized operation plan	C4	30.09.2018.
Special issue of newsletter 'Cincér' on the project, 5000 pcs	D7	09.07.2015
26 minute long film on 'Turjánvidék' Natura 2000 site southern unit	D7	31.08.2015
1 thematic 'Rosalia' volume in Hungarian, in 540 copies about the conservation and research of Turjánvidék region	D9	17.08.2018
Research report of management monitoring of Actions C1, C2, C3 and C5	E2	31.12.2015
1 thematic (IAS) WWF booklet in Hungarian for laymen, in 12 000 copies altogether	D9	30.09.2018
Wooden bollards installed on 4200 m	C7	30.11.2017
Wire fence is installed around 5 off-road motorbiking spots	C7	30.11.2017
4 wooden chip reservoirs are designated and barriered	C7	30.11.2017
1300 m + 600 m former dirt road reconstructed, 2 U turn sites are designed	C7	30.11.2017
min. 2500 conservational data collected in field by military users and elaborated	D6	27.05.2015.
15 scientific publications/posters/presentations	D8	30.09.2018
1000 copies of Layman's report in Hungarian and English languages	D10	30.09.2018
After LIFE management plan	E3	30.09.2018

MILESTONES OF THE PROJECT

Name of the Milestone	Code of the associated action	Deadline
Technical implementation of the project established (Recruitment of new personnel, acquisition of office equipment, Kick-off meeting, partnership agreements)	E1	22.02.2012
Design of the project brand including logo	D2	31.01.2012
Project website set up	D1	28.02.2012
Land purchase: 19,1 ha arable land for conservational management purposes	B1	30.06.2012
1 permitted construction drawing and contracts for construction of management objects on 'Dabasi Turjános' NCA	A2	15.12.2014
45+19,1 ha conversion of enclosed arable land into grassland started, (alfalfa and grass seed sowing)	C5	31.08.2013
1 field trip in the frame of environmental officer training 1.	D6	15.05.2013
Press conference with press trips held for the national media, 1. for introduct the project	D7	20.06.2013
1 national and 1 international experts' forum, platform for sharing experiences on invasive species	D9	21.04.2016
1 permitted construction drawing and contracts for construction of management objects on Táborfalva Military Shooting Range	A2	19.09.2017
Munition treatment plan is compiled	A3	31. 05. 2012
Elimination of an illegal sand pit on 1, 3 ha	C7	31. 10. 2014
End of implementation of munition treatment	C8	30.10. 2017
1 field trip in the frame of environmental officer training 2.	D6	31.08.2018
In 500 ha potential Viper protection area the gradual introduction of extensive grazing instead of machinery mowing, combined with mowing in a mosaic pattern (15%)	C5	31.12.2016
5 'Green Days' on Táborfalva Military Shooting Range during the project	D5	31.12.2017
10-30% hawthorn suppression on 1100 hectars	C1	end of project
70% invasive elimination and 10-30% hawthorn suppression on 900 hectar	C1	end of project
Press conference with press trips held for the national media, 1. about the results of the project	D7	17.10.2017.
1100 ha Pannonic sand steppes and Pannonic inland sand dune thickets are free of invasives in 95%	C1	31.12.2017.
42 ha non-indigenous forests (primarily Black Locust) restructured into indigenous forests	C2	30.09.2018
56 ha alder and ash gallery forest (91E0) is free of invasives	C3	30.09.2018
15 ha buffer zone for 91E0 forests is free of Russian Olive	C3	30.09.2018

Restructuring of 4.5 ha Hybrid Black Poplar plantation into ash gallery forest	C3	30.09.2018
35-40 characteristic species sowed on 55 ha	C5	30.09.2018
Development of 4.57 ha potential Viper habitats with transforming forests into meadows (clearings) and grazing	C6	30.09.2018
At least 3000 m of unfavourable dirt roads are abandoned in Meadow Viper habitats, further 2500 m is with restricted use.	C7	30.09.2018
Cca. 35-60 m^3 illegal waste is removed	C7	30.09.2018

5.3 Evaluation of Project Implemention

For the methodology of project implementation see Point 4.

The aims set in the original proposal were met, some even with extra content. A very important lesson was learnt: the preparatory actions and procedures were more lengthy than foreseen. However, we were unable to fulfil most of the additional tasks (GA modification No.2)., mainly because the capacity of beneficiary was low.

Comparison of the project results against the objectives:

Task	Foreseen in the revised proposal	Achieved	Evaluation
A1	1. Legally binding forestry permits between 2012 and 2016, for Actions C1, C2, C3 and C6 The inclusion and regulation of the habitat status developed in the project in the forestry management plan valid in 2013-2022 2. Contracts for construction works bound for Actions C1, C2, C3 and C6 (according to procurement rules)	1. forest management plans for 2013-2022 for the compartments of the project area which are managed as forests, incorporating the tasks of HUTURJAN LIFE+ project; the new forest management plans were permits for the implementation of nature conservation management works of this project 2. forest habitat management works were planned, prepared in details and contracted	completed, no problems, no modifications, cost-effective, successful results, same content as foreseen, immediately visible results (maps, contracts, etc.); **important and effective part of the project**
A2	1. 1 permitted construction drawing for Dabas Turjános NCA 2. 1 permitted construction drawing for Táborfalva SR 3. Contracts for construction works bound for Action C4 (according to procurement rules) a.) in Dabas Turjános NCA b.) in Táborfalva SR	1. construction drawing was compiled for construction works in Dabas Turjános NCA (for Action C4) 2. construction drawing was compiled for construction works in Táborfalva SR (for Action C4) 3. a.) Contract for construction works in Dabas Turjános NCA for Action C4 (company selected by public tender) b.) Contract for construction works in Táborfalva SR for Action C4 (company selected by public tender)	completed, problems (Point 2. and 3. b. is delayed, see Action A2 in Point 5.1), modifications of the foreseen number and size of water management objects, cost-effective, immediately visible results (contracts); **important part of the project, lesson learnt: more lengthy action than foreseen**
A3	1. A well-established munition treatment plan, that enables safe circumstances for construction works	1. Munition treatment plan was compiled	completed, no problems, no modifications, cost-effective, successful results, same content as foreseen, immediately visible results (munition

			treatment plan) **important and effective part of the project**
B1	1. On 19.1 ha area DINPD, as owner guarantees the implementation of conservation management	1. 19.1 ha large area, potential viper habitat is owned and managed by DINPD with conservation guarantee	completed (before schedule), no problems, no modifications, cost-effective, successful results, same content as foreseen, immediately visible results (contract), later visible results (changed ownership sheet, etc.) **important and effective part of the project**
C1	1. 1100 ha Pannonic sand steppes and Pannonic inland sand dune thickets are free of invasives in 95%	1. 1172 ha of Pannonic sand steppes and inland sand dune thickets are free of alien plant species in 98%	completed, no problems, no modifications, cost-effective, successful results carried out in a larger area than foreseen, immediately visible results (after one day plants begin to wilt) **important and effective part of the project**
C2	1. 42 ha non-indigenous (mainly Robinia, and Pinus) forests, border or enclosed in priority habitats, restructured into indigenous forests, 28 ha complete and gentle reconstruction, (from that: 17 ha interior parts complete reconstr., 11 ha outer areas by gentle reconstr.) and 14 ha gentle reconstruction (enclosed patches).	1. 26.13 ha planting with native species in the place of former IAS plantations, 10.04 planting in new location, 15 ha forest cleared from IAS: 51.17 ha native forest altogether, 11 ha IAS plantations were turned to grassland	completed, no problems, modifications (see Action C2 in Point 5.1), cost-effective, successful results, immediately visible results (clearcutting), later visible results (new native plantation) **important and effective part of the project**
C3	1. 56 ha elimination of invasives from alder-ash gallery forests, 2. 4.5 ha from that reconstruction with alder and ash saplings, 3. 15 ha alder ash forest buffer zone is free of Russian Olive,	1. 59.45 ha ash-alder and hardwood gallery forest is free of alien plant species 2. 4.57 ha reconstruction with alder and ash saplings,	completed, no problems, no modifications, cost-effective, successful results, immediately visible results (after one day plants begin

	treated area altogether 75.5 ha.	3. 14.59 ha area is free of Russian olive	to wilt, clearcutting) **important and effective part of the project**
C4	1. 5+3 water management objects, 2 observation wells 2. The water supply is improved in 88 ha alder-ash gallery forests, priority habitat (91E0) 3. The water supply is improved in 1400 ha Natura 2000 site (e.g. Molinia meadows on calcareous, peaty or clayey-silt-laden soils 6410) 4. 2 harmonized operation plan	1. 3 water management objects were constructed in Dabas Turjános NCA, 4 larger and 10 smaller water management objects were built/reconstructed in Táborfalva SR 2. The water supply is improved in 88 ha alder-ash gallery forests, priority habitat (91E0) 3. The water supply is improved in 1400 ha Natura 2000 site 4. 2 harmonised operation plan	completed, delayed (see Action A2 in Point 5.1.), modifications in size and number of the water management objects **important and effective part of the project, lessons learnt: its preparatory action was longer than foreseen**
C5	1. 19.1 ha (Dabas, B1 - land purchase) and 55 ha (Military Shooting Range) arable land conversion into grasslands, 74.1 restored habitat, gradual introduction of grazing 2. Development of potential Hungarian Meadow Viper habitats: introduction of extensive grazing on 500 ha, 70% of them Molinia meadows (6410), 30% Pannonic stand steppes, closed sand steppes (6020) instead of machinery mowing	1. 19.1 ha ploughland in Dabas NCA was changed into grassland, 55 ha (Military Shooting Range) arable land conversion into grasslands, 74.1 restored habitat, gradual introduction of grazing 2. Development of potential Hungarian Meadow Viper habitats: introduction of extensive grazing on 900 ha, 70% of them Molinia meadows (6410), 30% Pannonic stand steppes, closed sand steppes (6020) instead of machinery mowing, 2400 ha is grazed altogether	completed, solved problem, see Point 5.1 for Action C5, no modifications (larger grazed area than foreseen), cost-effective, successful results (alfalfa is sown on 55 ha instead of 45 ha within the SR), immediately visible results (grazing) later visible results (alfalfa and grass occupied the ploughland) **important and effective part of the project**
C6	1. 12+18 ha forests transformed to meadows ; development of 30 ha potential Viper habitats with transforming forests into meadows (clearings) 2. Possibility of vertical migration for the Viper 3. Decrease of invasive quantities	1. 4.58 ha forests transformed into meadows 2. In the cleared parts, possibility of vertical migration for the Viper is given 3. Decrease of invasive quantities	partly completed, delayed, (see Action C6 in Point 5.1), modifications immediately visible results (IAS were cut, or after one day plants began to wilt) **important part of the project**
C7	1. Regulated closing of the roads crossing project area with the instalment of 41 crossing gates	1. regulated closing of the roads crossing the project area with 41 crossing gates	completed (before schedule), no problems, no modifications, cost-

	2. Cessation of occasional soil surface disturbance and eradication of invasives dropping seed in the sand habitat block, with the elimination of an illegal sand pit in 1.3 ha	2. halting the soil surface disturbance with closing the illegal sand pit and quitting the spread of invasives through their elimination (1.3 ha) 3. 73 t illegal waste was removed	effective, successful results, same content as foreseen, immediately visible results (crossing gates, ditches) **important and effective part of the project, lessons learnt: vandalism is still common in the area**
C8	1. Safe circumstances for construction works, life hazard is eliminated	1. Safe circumstances for works, life hazard was eliminated in 2.65 ha forest regeneration site and sites of water management objects	completed, delayed, modifications, (see Action C8 in Point 5.1) **important and effective part of the project**
D1	1. An up-to date website in Hungarian and English version with e-mail address, downloads, links to a number of other websites (LIFE+, beneficiary, partners, other projects) are established 2. An individual webpage on the practical experiences in invasive elimination with a forum and links is set up 3. Min. expected number of visitors: 10 000 during the project period	1. an up-to-date project website in Hungarian and English with downloads, links 2. practical experiences can be downloaded on invasive plant management. Pages of the international invasive plant workshop have been set up. Military conservation training material is also available. 3. 78,954 visitors during the project period	completed, no problems, no modifications, cost-effective, successful results (number of visitors is eight times larger than foreseen), immediately visible results (webpage set up) **important and effective part of the project**
D2	1. Easy-to-understand, nice and consistent design made by project logo and graphical elements with high advertising value 2. Different types of promotion objects (textile bags, pens, stickers, etc.) in altogether 3000-3500 pieces	1. nice and consistent logo of high advertising value 2. 4588 different promotion objects	completed, no problems, no modifications, cost-effective, successful results (number of promotion objects is higher than foreseen), immediately visible results (logo, promotion objects) **important and effective part of the project**
D3	1. 6 information boards set up 2. 20 out placed boards of demarcation and further 10 items as replacement	1. 8 information boards set up 2. 20 Natura 2000 demarcation boards set up 3. 81 supplementary warning	completed, no problems, no modifications, cost-effective, successful results (the number of

		signs set up	information boards is higher than foreseen), immediately visible results (boards set up) **important and effective part of the project**
D4	1. 2000 copies of A4 format, full-colour brochures in Hungarian and English, printed on recycled paper	1. 3500 project brochures were issued (Hungarian and English)	completed, no problems, no modifications, cost-effective, successful results (the number brochures is higher than foreseen), immediately visible results (brochures) **important and effective part of the project**
D5	1. 5 'Green Days' on Táborfalva Military Shooting Range during the project 2. Min. 30 participants per event, 180 persons altogether	1. 7 Green Days 2. cca. 230 participants altogether	completed, no problems, no modifications, cost-effective, successful results (the number of occasions and number of participants is higher than foreseen), immediately visible results (visiting groups) **important and effective part of the project**
D6	1. 2 field trips in the frame of environmental officer training 2. min. 500 conservation data collected in field by military users per year 3. 1 training CD-ROM for military users 4. 2000 pieces of laminated pocket cards in Hungarian and English	1. 2 occasions are completed 2. completed (2651 biotic data items during the project) 3. training material is available on-line, 150 CDs are distributed 4. application is available on: https://play.google.com/store/apps/details?id=dinpi.loter.raabdigital	completed, delayed, (see Action D6 in Point 5.1.), instead of pocket cards there is an application available, **important part of the project, lessons learnt: more lengthy process than foreseen**
D7	1. increased interest on the issues targeted by the project and wide knowledge on the results achieved 2. wide media presence	1. increased interest on the issues targeted by the project and wide knowledge on the results achieved 2. 200 media clippings,	completed, no problems, no modifications, cost-effective, successful results

	3. 2 press conferences with press trips held for the national media 4. press releases are issued 5. a special issue of newsletter 'Cincér' on the project 6. a 15 minute long film on 'Turjánvidék' Natura 2000 site 7. press articles collected and filed in	including TV interviews 3. 2 press conferences and press trips press trips held for the national media 4. press releases were issued 5. special issue of 'Cincér' newsletter published (in higher number than foreseen) 6. a 25 minute long film on 'Turjánvidék' Natura 2000 site available on-line 7. press articles are collected and filed in (special issue of WWF Magazine is also published)	(more than foreseen), immediately visible results (issued articles, film, etc.) **important and effective part of the project**
D8	1. 3 conference participation for 2 persons 2. 6 scientific publications/posters/presentations	1. 21 conference, 41 participation 2. 15 scientific publications/posters/presentations	completed, no problems, no modifications cost-effective, successful results (the number of scientific publications and participations is higher than foreseen), immediately visible results (issued scientific material, presentations) **important and effective part of the project**
D9	1. 1 national experts' forum, platform for sharing experiences on invasive species 2. 1 international experts' forum, platform for sharing experiences on invasive species 3. 1 thematic 'Rosalia' volume in Hungarian, in 500 copies 4. 1 thematic WWF booklet in Hungarian and English, in 1000 copies altogether	1. 1 national experts' forum, platform for sharing experiences on invasive species 2. 1 international experts' forum, platform for sharing experiences on invasive species 3. 1 thematic 'Rosalia' volume in Hungarian, in 540 copies 4. 1 thematic IAS booklet for laymen in Hungarian and English, in 12000 copies altogether	delayed (Rosalia), no problems, no modifications, cost-effective, successful results (the number of participants of the IAS fora was higher than foreseen, the IAS booklet was issued in a higher number), immediately visible results (organised forum, printed materials) **important and effective part of the project, lessons**

			learnt: more interested parties in IAS information exchange than foreseen
D10	1. 1000 copies of Layman's report in Hungarian and English languages (in A4 format, on recycled paper, full colour, text with photos and figures) 2. A publication documenting the aims, steps and goals of the project	1. 1000 copies of Layman's report in Hungarian and English languages (in A4 format, on recycled paper, full colour, text with photos and figures) 2. A publication documenting the aims, steps and goals of the project	completed, no problems, no modifications cost-effective, successful results immediately visible results (issued material) **important and effective part of the project**
D11	1. Well established and tried technologies of invasive control, on forums will collect the experiences	1. exchanged experiences in the topic of invasive management, viper monitoring, military in conservation areas, communication, project administration, etc.	completed, no problems, no modifications, cost-effective, successful results (the number of topics in information exchange is higher than foreseen), immediately visible and later results (due to experience exchange) **important and effective part of the project**
E1	1. 1 partnership agreement 2. Min. 4 newly employed persons 3. Min. 5 project workshops 4. 5 project report 5. Continuous and smooth project implementation 6. Continuous contact between partners 7. Quick and concrete answers to raising problems 8. Continuous contact with the responsible persons of LIFE-monitoring, MEW DD and European Commission	1 partnership agreement 2. Min. 4 newly employed persons 3. Min. 5 project workshops 4. Continuous but partly problematic project implementation 5. Continuous contact between partners 6. Not so quick but concrete answers to raising problems 7. Continuous contact with the responsible persons of LIFE-monitoring, MoA and European Commission	completed, problems, modifications, cost-effective, successful results, visible and later visible results **important and relatively effective part of the project**
E2	1. direct indicators for all management actions C1-C7 2. direct indicators for all communication actions D1-D11	1. direct indicators for management actions C1, C2, C5 2. direct indicators for	completed, no problems, no modifications, cost-effective,

	3. monitoring data series for min. 30 sample areas, at least twice a year 4. min. 3000 GIS data record	communication actions D1-D9, D11 3. monitoring data series for 32 sample areas 4. 30,552 GIS data records collected during the project	successful results (the number of sample areas is higher, and GIS data is a magnitude higher than foreseen), immediately visible results (data) and later results (due to the evaluation of records at the end of the project) **important and effective part of the project**
E3	1 After-LIFE conservation management plan, which is at the same time the updated management plan of the southern unit of 'Turjánvidék' Natura 2000 site	1. After-LIFE conservation management plan 2. updated CM	completed, no problems, no modifications, cost-effective, successful results **important and effective part of the project**

Indicate effectiveness of the dissemination and comment on any major drawbacks:

- The dissemination actions targeting the general public were implemented according to the schedule and with the expected effectiveness and results. Media interest at the press conferences and field trips was higher than the foreseen level, and also the website has been generating higher traffic than expected.
- The film produced about the project was aired 3 times in national TV channels and the interest is continuous after the closing of the project (another TV channel is willing to broadcast it several times). The project site also inspired the production of a longer nature documentary, which was awarded at the International Nature Film Festival 2018 in Gödöllő and was selected for festivals abroad.
- One extra (not planned in the proposal) tool was introduced, the thematic issue of the WWF Magazine. It was distributed directly to all inhabitants near the project site (approx. 10,000 households) so this, together with the information boards contributed largely to the raised awareness of local people. The Cincér newsletter special issue raised attention of nature-lovers to this hardly known region of the country.
- The publication on the topic of the invasive plants for the general public bridged a gap and in this regard and it was an important step towards a new target group. It opened the door toward a new partnership with one of the biggest garden supply retail chain of the country, which decided to participate in the awareness raising of their customers regarding invasive plants.
- The expert events on invasive plants attracted much more professionals than planned, the number of participants was the triple. It shows that these are responding to a real need of the conservation sector, both within the country and abroad. That interest triggered the reprint of the manual on eradication and control of invasive plants (2nd revised edition).

- The monograph on the Turjánvidék was very well received by the scientific community. It is the most important mean of the dissemination of technical results of the project and also a step towards the definition of future directions of research and management.
- As a result of the continuous presence of DINPD staff on the SR, the awareness on the importance of nature conservation interests has been raised among the army officials. Military users' knowledge about conservation has notably been increased during the negotiation process of the management plan.

5.4 Analysis of long-term benefits

1. Environmental benefits

a.) Direct / quantitative environmental benefits:

The overall natural state of the southern part of the 'Turjánvidék' Natura 2000 site is improved.

The natural state is improved in the case of the following 6 habitats of community importance: Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) (91E0), Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) (6410), Alluvial meadows of river valleys of the Cnidion dubii (6440), Alkaline fens (7230), Pannonic sand steppes (6260) and Pannonic inland sand dune thickets (91N0). The natural state of the species mentioned below is improved : 24 Natura 2000 species of community importance (among these Hungarian Meadow Viper is of priority importance), 31 strictly protected species (in the phase of project compilation their number was 24), 266 protected species (in the phase of project compilation their number was 192); and 24 red data book animal species.

b.) Relevance for environmentally significant issues or policy areas:

HUTURJAN project directly helps to reach the aims of Habitats Directive (Council Directive 92/43/EEC) as the conservation management supports to reach and maintain the favourable conservation status of habitats and species within the Natura 2000 network.

Our project also contributes to the successful implementation of the key objectives of the 7th Environment Action Programme: With the management of habitats we protect, conserve and enhance the Union's natural capital. During project implementation we apply a resource-efficient, green, and competitive low-carbon economy (preference of digital information exchange, use of recycled paper, solar energy, etc.)

We also directly contribute to the objectives of the Commission Communication COM (2006) 216 final: "Halting the loss of Biodiversity by 2010 – and beyond"

2. Long-term benefits and sustainability

a.) Long-term / qualitative environmental benefits:

The tasks undertaken in the project were carried out, so we succeed in mitigating the main factors threatening the Natura 2000 habitats and species of the area.

After the end of the project the following activities are planned:

the maintenance of restructured forests with indigenous tree species (C2, C3); maintenance and use of water management objects; the extensive grazing of areas inhabited by the Hungarian Meadow Viper (C5); maintenance of new grasslands developed from plantations (C6); maintenance of crossing gates (C7); providing access to the website of the project (D1); maintenance of the information and demarcation boards (D3); further use of military nature conservation material (D6).

The responsibility relations of the implementation of actions after the project duration will remain the same as in the proposal. Activities will be financed from the organisations' own budget. The project equipment will be used for conservational actions and for surveys and by the partner that has purchased it.

The detailed regulation and tasks regarding the period after the project is described in the After-LIFE management plan.

After eliminating the invasive species (C1, C3) there will be no need to interact actively according to our expectations until cca. 10 years in the same areas. However, the press of invasive plant species from the areas surrounding the project site will remain a problem. In

water retention we can extend the time and quantity of the water remaining in the area, however, we cannot influence the negative effects of climate change (decreasing annual precipitation quantity and unpredictable annual distribution).

b.) Long term qualitative economic benefits:
With the use of the water management objects a more favourable water supply can be provided for the Natura 2000 habitats and species in the whole project area and beyond. However, as in the region the land-use as pastures or hay-meadows is characteristic, the higher production of grasslands has a beneficial effect also on the private farming of the region. A larger water quantity kept in the area has very positive effect on the forests and forestry of the region, too.
As a result of the cooperation between the project partners, more state-owned land parcels can be leased by local farmers as a part of the conservation management of the Natura 2000 area. It is very important, as in this area the land leasing possibilities are scarce.

c.) ***Long term qualitative social benefits:***
The advantages listed in Point b.) contribute to the higher employment rate for the locals in the region.
Although the nature trail at the edge of the SR was not constructed in the frame of our project, we advertise it through our webpage and set a good example with inviting schoolchildren groups from the neighbouring settlements to visit the site. This possibility can be a part of increasing social welfare on the long term.
Our more stable, improved Natura 2000 area is able to provide more in the field of ecosystem services at the local, national and also on the global level.

d.) Continuation of the project actions by the beneficiary or by other stakeholders:
Water management objects will be managed by the military users (representatives of Bakony Combat Centre) with the guidance of DINPD.
Monitoring activities according to the national standards will be carried on (NBMR), also for the spread of invasive plant species.
Cattle grazing in the Hungarian Meadow Viper habitats continues, guaranteed by a declaration (including conservation management requirements) attached to lease contracts.
The cooperation between the conservation and military will be carried on. The CMP is used in its present version until the end of 2019. The application and training material will be used also after the deadline of the project.
The project website will further operate.
The details of the maintenance of the results is regulated and accepted by the After-LIFE management plan.
For more details see the After-LIFE management plan.

3. Replicability, demonstration, transferability, cooperation:
Our conservation management measures are replicable in any similar habitats in the Duna-Tisza Interfluve. The practical invasive management methods can be downloaded from our webpage and was also shared at a professional forum, thus became replicable.
The conservation materials for the military are replicable for the troops using Táborfalva SR, however, these can be transferred and adopted to other used military areas of Hungary.
The project achieved good results in the cooperation in practice between the conservation and military. Before the project the cooperation in the project area was rare and formal.
(For demonstration value please see Point 5.)

4. Best Practice lessons:
We have already used best practices of former LIFE projects, in invasive management and forest regeneration (see in Point 5.1 in Action A1 and C2). In HUTURJAN project a best practice can be that a LIFE project brings a very valuable, but (from the conservation point of view) relatively unknown area into the limelight: it can raise the attention of the stakeholders, land users, locals and also the scientific community, etc. In this region, the lack of water is a rather serious problem, and we disseminated a lot of information about the need of change (necessity of water retention).

5. Innovation and demonstration value:
The innovative domains of actions in HUTURJAN project:
cooperation with different sectors (DINPD, MoD DEB, BFC, WWF)
cooperation with military (training, field trips)
approach to water supply problems of the Duna-Tisza Interfluve
environmental education in an area which lacks this facility
elaborate collection of experience on practical invasive management

The demonstrative value of the project is shown related to two types of audience: the military users of the shooting range and the civil population of the settlements concerned.
The majority of the target area is in active military usage, it functions as a shooting range and manoeuvring site, thus the most important users are soldiers. Our aim is to increase their environmental awareness and form their attitude – this is manifested in several actions.
The shooting range cannot be visited so the neighbouring civil population is not aware of its natural values; they often consider it to be a hindrance to the development of their settlements. For their sake, we annually organized field trips for schoolchildren (‘Green Days’) with the intention to draw their attention to the nationally and internationally unique natural values of the area.

6. Long term indicators of the project success:
long term indicator: conservation status of the habitats: EU and national indicators are used to assess the conservation status of habitats of community importance of the EU

long term indicator: conservation status of the species (Hungarian Meadow Viper and other Natura 2000 species of the area): national indicators are used to assess the conservation status of habitats of community importance of the EU

6. Comments on the financial report

The Coordinating Beneficiary (DINPD) and the three Associated Beneficiaries (the MoD DEB, the BFC, and WWF) all contribute to the costs of the project and they also benefit from the LIFE grant.

The final financial reporting period is 01/09/2011 to 30/09/2018 (except the auditor's final invoice which was paid in March of 2019).

Each beneficiary keeps accounting in HUF. In accordance with the Commission's financial guidance in the present final report, accounting is based on exchange rates published by the European Central Bank on the first working day of the year in which the expenditure was paid.

None of the project participants can recover the VAT from the national tax authorities, thus the gross costs, including VAT, are accounted.

The CB examined the compliance with the 2% rule, the own contribution of public beneficiaries is above the total reported costs for permanent personnel.

6.1. Summary of Costs Incurred

	PROJECT COSTS INCURRED			
	Cost category	**Budget according to the amended (2017) grant agreement**	**Total costs incurred from the start date to 30/09/2018 (+ final invoice of audit (2019))**	**%**
1.	Personnel	622 713,00	668 600,12	107,37%
2.	Travel	88 750,00	78 627,79	88,59%
3.	External assistance	1 162 482,00	901 953,87	77,59%
4.	Durables: total non-depreciated cost	0,00	0,00	
	- *Infrastructure sub-tot.*	382 601,00	225 818,38	59,02%
	- *Equipment sub-tot.*	120 736,00	144 121,10	119,37%

	- *Prototypes sub-tot.*	0,00	0,00	
5.	Land purchase	88 147,00	72 905,40	82,71%
6.	Consumables	46 022,00	41 136,58	89,38%
7.	Other costs	67 100,00	54 976,40	81,93%
8.	Overheads	151 551,00	91 980,48	60,69%
	TOTAL	**2 730 102,00**	**2 280 120,12**	**83,52%**

6.2. Accounting system

All costs incurred by the project participants were registered in the analytical accounting systems of the respective participants and these are differentiated from all other expenditures with the help of a source code which makes them easily identifiable. All costs related to the project were properly supported with accounting documentation. Certified copies of the original documents of the Associated Beneficiaries (tender documents, invoices, purchase orders, proof of payments, salary slips, time sheets) were sent to the Coordinating Beneficiary, thus these were systematically filed and are available at the DINPD Headquarters.

Working time for each person involved in the project was registered electronically on the basis of the timesheet template recommended by the Commission printed and signed monthly by the respective staff members and approved by their project managers (except for the members of the project staff who worked exclusively in HUTURJAN LIFE project).

The estimated annual salary cost charged by the Associated Beneficiaries during the year (in monthly reports) was corrected at the end of the year on the basis of annual salary declarations (attached).

The invoices and other accountancy documents were stamped with a special HUTURJAN project stamp which ensures that the incurred costs will be accounted exclusively for our project.

6.3. Partnership arrangements

DINPD opened a foreign currency account in EUR to which the EU contribution is transferred. We frequently exchange EUR to HUF and transfer it to the DINPD's main account from which payments are made after accepting the submitted monthly financial reports of the associated beneficiaries.

The expenses of the coordinating beneficiary and the reimbursements toward the Associated Beneficiaries (based on their examinated monthly reports) are approved by the director and vice director of finance of CB.

Based on the continuous AB's costs monitoring and planning, 80% of the requested EU contribution of Associated Beneficiaries was transferred by the CB toward ABs. The remaining 20% will be reimbursed following the approval of the Final Report.

The Partnership Agreement was amended in April of 2018: there was a need for a small reallocation of the budget between the Beneficiaries due to the prolongation of the project. These changes were not substantial, did not change significantly the content of actions. (Amended Partnership Agreement attached).

This final financial report is implemented by the coordinating beneficiary on the basis of monthly reports received.

The project costs incurred by Partners are presented in the table below:

Beneficiary	Budget according to the amended (2017) grant agreement	Budget according to the amended (2018) partnership agreement	Total costs incurred from the start date to 30/09/2018 (+ final invoice of audit (2019))	%
BFC	€ 880 440,00	€ 912 846,00	€ 911 969,96	**99,90%**
MOD DEB	€ 503 771,00	€ 503 771,00	€ 320 771,89	**63,67%**
WWF	€ 188 663,00	€ 189 959,00	€ 189 959,00	**100,00%**
DINPD	€ 1 157 228,00	€ 1 123 526,00	€ 857 419,27	**76,32%**
TOTAL	**€ 2 730 102,00**	**€ 2 730 102,00**	**€ 2 280 120,12**	**83,52%**

The main reason for the underspending in the case of MoD DEB was that there was a considerable saving in the construction of water management objects, which we planned to spend for the activities described in Amendment to GA No.2. However, as a serious lack of capacity emerged in the project management, these activities were not implemented.
In the case of DINPD we aimed to spend our savings in the frame of the activities described in Amendment to GA No.2. After losing our experienced field coordinator we could not implement these additional conservation aims.

6.4 Auditor for Final Report

László Nagy dr.
individual entrepreneur
HU-4033 Debrecen, Kisfaludy utca 11.

Reg.No.:ES-204268

For audit report see Annexes.

6.5 Summary of costs per action

Action no.	Short name of action	1. Personnel	2. Travel and subsistence	3. External assistance	4.a Infra-structure	4.b Equipment	4.c Proto type	5. Purchase or lease of land	6. Consumables	7. Other costs	TOTAL
A1	Preparation of forest habitat management	1 298,25	2 345,48			6 123,14			97,81	7 910,95	17 775,63
A2	Preparation of water supply regulation	15 926,36	2 563,92	33 290,35		260,08			9,99	1 771,47	53 822,17
A3	Munition treatment planning	1 639,48	806,69	3 029,77							5 475,94
B1	Land purchase in the administrative area of Dabas	31 767,19	82,53	1 225,67				72 905,40		122,97	106 103,76
C1	Control of invasive species in sand habitats	26 990,12	5 790,87	151 636,01					108,84		184 525,84
C2	Restructuring of non-indigenous forests into indigenous ones	30 244,30	6 300,81	369 139,28					8 601,99	85,70	414 372,08
C3	Reconstruction of alder and ash gallery forests	18 931,88	3 857,27	39 700,31							62 489,46
C4	Water control and retain in the southern unit of 'Turjánvidék' Natura 2000 site	74 417,24	1 964,50	39 347,32	211 226,71	11 500,33			103,80	2 966,52	341 526,42
C5	Development of potential Hungarian Meadow Viper habitats with grazing	57 852,59	7 185,56	86 491,87		24 686,79			34,71		176 251,52
C6	Development of potential Viper habitats with transforming forests into meadows	18 500,11	3 493,52	11 519,90							33 513,53
C7	Moderation of general threatening factors	12 051,84	3 407,85	7 153,75	11 019,16				1 608,80		35 241,40
C8	Munition treatment	2 349,90		11 433,19							13 783,09
D1	Information to the general public – website operation	12 463,49		2 355,41							14 818,90
D2	Creation of project brand	9 635,87		3 268,08					18 942,62	4 460,91	36 307,48
D3	Setting up information boards	4 420,32		2 808,71	3 572,51				111,33	0,00	10 912,87
D4	Compilation of project brochure	1 268,69		268,62					695,90		2 233,21
D5	'Green Days' on Táborfalva Military Shooting Range	13 344,35	3 000,81	869,17					496,41		17 710,74

D6	Nature conservation training for military users and environmental officers	25 310,11	4 713,76	7 752,46		6 864,12			266,00	20,51	44 926,96
D7	Information to the general public - Media work	15 261,08	443,53	15 728,96					1 161,49		32 595,06
D8	Dissemination of scientific results of the project	3 139,31	6 175,70						35,31	3 927,73	13 278,05
D9	Best practices in the defence against invasive species	26 589,36	546,63	55 552,52					576,90	5 533,45	88 798,86
D10	Compilation of Layman's report			1 144,80					32,41	1 637,97	2 815,18
D11	Networking with other LIFE projects	1 375,84	1 236,17						725,21	569,88	3 907,10
E1	Technical and financial implementation of the project, coordination	237 456,16	16 759,58	35 561,25		82 864,21			5 943,63	25 968,35	404 553,18
E2	Conservation management monitoring	26 366,27	7 952,61	22 676,47		11 822,43			1 583,42		70 401,20
E3	After-LIFE conservation management plan										0,00
Over-heads											91 980,48
	TOTAL	668 600,12	78 627,79	901 953,87	225 818,38	144 121,10	0,00	72 905,40	41 136,57	54 976,41	2 280 120,12

In Action C1 and C2 the budget is overspent because the project lasted longer than foreseen and BFC continued the IAS post-treatments and the nursing of plantations for an extended period.

6.6 Unexpected expenditures

In accordance with Decree No. CXVII/1995, Duna-Ipoly National Park Directorate has to pay a 'representation tax' related to catering and marketing expenditures incurred on business, official, professional and diplomatic events. This statutory tax is charged on the gross invoiced cost and its decreasing rate is presented in the table below:

Year	**Rate of representation tax** (charged on the gross invoiced cost)
2015	51,17%
2016	49,98%
2017	43,66%
2018	40,71%

The tax is due to the National Tax Authority of Hungary by the 20th of each month subsequent of the incurrence of the costs. The ‘representation tax’ related to eligible invoices of a project is accounted on the project file and identified with the same ‘source code’.

On request from the Commission, an example for internal memo on representation tax to be paid to the National Tax Authority related to the costs of catering for project meetings and promotional costs was attached to second Mid-term Report.

7. Annexes

7.1 Administrative annexes

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- 2._annex.pdf
- 3._annex.pdf
- 4._annex.pdf
- 5._annex.pdf
- 6._annex.pdf

4.1.3._personnel_HUTURJAN_complete_on_CD.xls
4.1.4._Amendment_no1_LIFE_HUTURJAN_on_CD.pdf
4.1.5_Amendment_no2_LIFE_HUTURJAN_on_CD.pdf
4.1.6._Amendment_no3_LIFE_HUTURJAN_on_CD.pdf
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4.1.8_IR_report_on CD
- inception_report_edited.pdf
- annexes_edited.pdf

4.1.9._1PR_report_on CD
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4.1.10._1MTR_on CD
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- Annexes_edited_v.pdf
- Individual_and_Consolidated_cost_statement_DINPD.pdf
- Individual_cost_statement_MoDDEO.pdf
- Individual_cost_statement_BFC.pdf
- Individual_cost_statement_WWF.pdf

4.1.11._2MTR_on CD
- 2MTR_HUTURJAN.pdf
- Annexes_edited.pdf
- DINPD_Individual_cost_statement2.xlsx
- MODDEB_Individual_cost_statement2.xlsx

BFC_Individual_cost_statement2.xlsx
WWF_Individual_cost_statement2.xlsx

4.1.12._2PR_on CD
2nd_progress_report_final.pdf
annexes_final.pdf

4.1.13._photo_visit_of_monitor_16-17.07.2014.JPG
4.1.14._photo_visit_of_EC_15.04.2015_Kezdy.jpg

7.2 Technical annexes

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5.1.2.-2._photo_field_negotiation_on_water_retention_on_SR_27.10.2014.JPG
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5.1.2.-9._water_rights_implementation_permit_for_hydr_eng_Dabas_NCA_on CD.pdf
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5.1.4.-6._decision_change_of_landuse_on_CD.pdf
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5.1.4.-7_land_registry_sheet_Dabas_0946_16.pdf

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5.1.6.-14_photo_native_tree_plantation_patch5_Csoka_2019.01._on_CD.JPG
5.1.6.-15_photo_native_tree_plantation_patch6_Csoka_2019.01._on_CD.JPG
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5.1.6.-18_photo_native_tree_plantation_patch9_1_Csoka_2019.01._on_CD.JPG
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5.1.8.-7_photos_on_construction_Taborfalva_Nagy_Oliver
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5.1.13.3_TERMERD_on_CD
5.1.13.4._research_report_coleoptera_2015_on CD.pdf
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5.2.2.8-6_photo_NATO_school.jpg
5.2.2.8-7._presentation_Milano_platform_meeting_on_CD.ppt
5.2.2.8-8._photo_Milano_platform_meeting.jpg
5.2.2.8.-9._photo_Grafenwoer.jpg
5.2.2.8.-10_presentation_Kaszo_conference_on_CD.pdf
5.2.2.8.-11_photo_Kaszo_conference.jpg
5.2.2.8-12._photo_study_trip_Deliblato_Mocskonyi_Zsofia.JPG
5.2.2.8-13._photo_similar_habitats_of_Deliblato_Mocskonyi_Zsofia.JPG

5.2.2.9._D9
5.2.2.9-1._national_invasive_seminar_registration_sheet_on CD.pdf
5.2.2.9-2._international_seminar_registration_sheet_on_CD.pdf
5.2.2.9-3._IAS_WS_Bp_2016_April_program_final.pdf
5.2.2.9.-4._Abstracts_booklet_IAS_ws_Bp_LIFE_2016_on_CD.pdf
5.2.2.9-5._IAS_PLANT_workshop_recommendations_final_on_CD.pdf
5.2.2.9-6_Rosalia_handbook_Hungarian_on_CD.pdf
5.2.2.9-7_Rosalia_handbook_English_on_CD.pdf
5.2.2.9-8_D9_distribution final.xls
5.2.2.9-9._Rosalia_volume_on_Turjanvidek_on_CD.pdf
5.2.2.9.-10_IAS_brochure_ozonnovenyek_a kertben_homokhatsag_on_CD.pdf
5.2.2.9.11._IAS_WS_Bp_2016_April_1st_Call_final_on_CD.pdf

5.2.2.10._D10
5.2.2.10-1._laymans_report_distribution final.xls
5.2.2.10-2._Turjanvidek_LIFE_HUN_on_CD.pdf
5.2.2.10-3._Turjanvidek_LIFE_ENG_on_CD.pdf

5.2.2.11._D11
5.2.2.11.-1_table_LIFE_networking_on_CD_2018.xlsx

For Layman's report see:
5.2.2.10-2._Turjanvidek_LIFE_HUN_on_CD.pdf
5.2.2.10-3._Turjanvidek_LIFE_ENG_on_CD.pdf
These are also attached in paper format.

Attached in a paper format:
Project launch brochure in Hungarian
Project launch brochure in English
Herald Cincér
WWF brochure on project
Brochure on IAS
Layman's report in Hungarian
Layman's report in English
project film on DVD

Rosalia monograph and Practical IAS management manual were sent in paper format to the EC earlier.

7.4 Final table of indicators
Attached on CD.