



LIFE Project Number  
**LIFE04NAT/HU/000119**

## **TECHNICAL INTERIM REPORT**

*Covering the project activities from 01.09.2004 (project start date) to 31.08.2006*

Reporting date  
**31/10/2006**

LIFE PROJECT NAME  
**Grassland restoration and marsh protection in Egyek-Pusztakócs**

Data project	
<b>Project location</b>	Tiszafüred and Egyek villages, Hortobágy NP, Hungary
<b>Project start date:</b>	01/09/2004
<b>Project end date:</b>	31/12/2008
<b>Total Project duration (in months)</b>	52 months
<b>Total budget</b>	€ 1 040 000
<b>EC contribution:</b>	€ 700 302
<b>(%) of total costs</b>	67.34
<b>(%) of eligible costs</b>	100.00

Data Beneficiary	
<b>Name Beneficiary</b>	Hortobágy National Park Directorate
<b>Contact person</b>	Mr. István SÁNDOR
<b>Postal address</b>	Sumen u. 2., Hungary, 4024, Debrecen
<b>Visit address</b>	Sumen u. 2., Hungary, 4024, Debrecen
<b>Telephone</b>	+36 52 512-920
<b>Fax:</b>	+36 52 512-940
<b>E-mail</b>	hnp@www.hnp.hu
<b>Project Website</b>	<a href="http://life2004.hnp.hu/index_eng.html">http://life2004.hnp.hu/index_eng.html</a>





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## 2. LIST OF KEYWORDS AND ABBREVIATIONS

**Key-words:**

systematic conservation planning, adaptive ecosystem management, collaborative management, enhancement of conservation status of Natura 2000 habitats and species, grassland restoration, grazing management of grasslands and marshes, extensive agriculture,

**Abbreviations:**

EPMS	Egyek-Pusztakócs Marsh System
FIMP	official Forest Implementation and Management Plan
HNPB	Hortobágy National Park Directorate (Beneficiary)
MP	Master Plan for the Long-term Rehabilitation of the EPMS
NAC	Nagyiván Agricultural Company
NLF	National Land Fund of Hungary
PBC	Hortobágy Nature Conservation and Gene Preservation Public Benefit Company
PC	Project Coordinator
PM	Project Manager
TIMPGR	Technical Implementation and Management Plan for Grassland Restoration
UD	University of Debrecen (Partner)



### 3. EXECUTIVE SUMMARY

#### 3.1. PROJECT OBJECTIVES

The overall objective of the project is to complete the grassland restoration step of the Egyek-Pusztakócs complex landscape-level rehabilitation programme with simultaneous actions to protect the marshlands already rehabilitated. Specifically, the proposed project aims to:

- establish corridors between grassland fragments and create buffer zones around marshes,
- transform arable lands in designated corridors and buffer zones into grasslands or wooded areas,
- eliminate the degrading effects of goose farms,
- allocate grazing to ungrazed areas,
- apply semi-natural disturbances to increase habitat diversity in homogeneous reedbeds, and
- provide feeding and nesting resources for birds of prey and waterbirds.

To achieve the above objectives, the following actions and measures are taken.

- Two ecological corridors are created by purchasing 14 ha land and restoring grasslands on 130 ha arable land in four areas, E grasslands are connected by 314 ha restored grasslands.
- 250 ha arable land are transformed into grasslands in 11 critical areas as bufferzones.
- Goose-farming is eliminated and replaced by sheep grazing on 415 ha grasslands purchased.
- The grazing scheme is extended to 1700 ha, and includes 220 ha grasslands ungrazed before.
- Grazing (60 ha) and fire management (95 ha) is used to open up reed in 7 locations in 3 marshes.
- 100 ha arable land is purchased and, with other 290 ha, is transformed into grasslands; 70 ha wooded area will be created on two lands in the most critical areas.
- 188 ha land in three areas will be extensively managed to produce food for small mammals; 70 ha wooded area will be created on two lands in critical areas.

#### 3.2. LIST OF KEY DELIVERABLES AND OUTPUTS

This table lists the most important deliverables and outputs of the project in the first 24 months.

Action	Key deliverable or output
A1 Preparation of land purchase	Preparation of over 60 contracts for 52 land parcels on 338 ha
A2 Plant and community inventory	Report on inventory of plant species and communities
A3 Development of mgmt. plans	Management plan for restored grasslands [TIMPGR] Management plan for newly created wooded areas [FIMP]
B1 Land purchase (arable lands)	34 land parcels on 33 ha surface area purchased in 3 locations
B2 Purchase of goose farm lands (grasslands)	18 land parcels on 305 ha surface area purchased in 1 location Goose-farming eliminated, replaced by sheep-grazing
C1 Grassland restoration	One ecological corridor and 8 buffer zones; grassland restoration started on 403 ha arable lands (loess 70 ha, alkaline 333 ha)
C2 Afforestation	22 ha wooded areas started ahead of time for experimenting
C3 Purchasing cattle	50 grey cattle contracted and being purchased
C4 Construct fold for cattle	One fold, one shepherds' home, grazing infrastructure built
D1 Grassland mgmt. by grazing	Grazing mgmt. on 640 ha grasslands by newly involved farmers
D2 Grazing, fire mgmt. in marshes	Cattle-grazing on ca. 350 ha in Fekete-rét marsh and ca. 70 ha in Meggyes marsh; fire management inhibited by unusual wet years
D3 Management of wooded areas	22 ha wooded areas mowed in Year 1; ca. 30 000 <i>Quercus</i> seedlings raised for replacement and new afforestation
D4 Ext. cultivation of wildlife lands	150 ha arable land cultivated according to rules favoring small game, small mammal and waterbird populations
E1 Awareness raising	Project web site in Hung./Eng., 4 information boards, 3000 copies of project brochure, farmer-meetings, project logo etc.



(table continued)

Action	Key deliverable or output
E2 Developing guidelines	Not started yet; intensive contact and sharing of information with other Hortobágy and grassland projects
F1 Project operation and management	Nomination of PM, PC; Project Implementation Team and Advisory Board; decree by HNPD Director on project mgmt.
F2 Biological monitoring	Monitoring system on arable lands, restored grasslands, marsh edges; potential habitat map, MP [unforeseen in rev. application]
F3 External audit	Not started yet.

### 3.3. SUMMARY OF ACTIONS

The 5000-ha EPMS is the site of one of the oldest and largest habitat rehabilitation programmes in Hungary. The first phase involved reconstruction of marshes hydrology, whereas this project improves the conservation status of grasslands and protects the marshes. Five habitat restoration/management actions are conducted on ca. 1650 ha: grassland restoration, afforestation, grazing of grasslands and marsh edges, fire management of marsh edges and extensive cultivation of arable lands. The extensive field activities require preliminary actions, e.g. land purchase to establish ecological corridors and buffer zones and to eliminate goose-farming, preparation of a baseline assessment and management plans for restorations. The actions also need adequate monitoring and communication to the general public, regional/local stakeholders and farmers.

The results so far are promising (please see 3.2, and Chapter 6 for more details). More than half of the lands planned have been purchased. More than half of the grassland restoration targets have been reached. Afforestation has been started earlier than foreseen. Grazing management on grasslands is implemented by local farmers and on marsh edges by the project cattle using the infrastructure constructed in the project. High water levels in the first two years have thus far inhibited fire management and afforestation success. Lands cultivated for wildlife attract high numbers of waterbirds and raptors. Awareness-raising activities have produced the deliverables foreseen. The project has a well-defined and operating management structure, and biological monitoring has been progressing as planned.

The involvement of local stakeholders has induced several changes but resulted in greater involvement by farmers in implementation. Such positive attitude of HNPD to the farmers was highly fruitful as several farmers could be made interested in the implementation of the project. The changing attitude of local people, stakeholders and farmers is the most beneficial socio-economic effect of the project.

The project directly benefits two Natura 2000 priority habitats and numerous Natura 2000 species, provides knowledge on restoration and subsequent management of the two habitats. The innovation novum of the project is that it attempts to maximise the diversity of habitats in order to maximise landscape-level biological diversity. This project draws attention to the importance of considering geographically and biologically intertwined habitats and the specific need to address the role of their diversity in maintaining landscape-level biodiversity at the policy level.

Close to half (47.1%) of the total project costs have been spent in 24 months (or 46% of 52 months total project duration). HNPD has invested a higher proportion of matching funds (42.8%) in the project thus far than expected based on the total project share (32.7%). The individual budget posts show a slight variation in the rate of usage. For Personnel, Durable goods and Travel, the costs are very close to the rate expected at this time of the project duration. For Land purchase, Consumables and Overheads, the rate of spending is above the average, whereas for External assistance and Other costs, the rate is lower than expected by the proportion of time passed.



#### 4. INTRODUCTION

**Background, problem, targeted conservation issues and threats:** The EPMS is the last remnant of alluvial habitat mosaics, consisting of extensive pannonic salt grasslands and marshes (Natura 2000 code: 1530) and fragments of pannonic loess grasslands (code 6250). A slow but steady deterioration of the marsh system started after floodings by river Tisza had ceased in the 1850s. The drying of the area accelerated in the 1920s and 1960s, resulting in a further expansion of arable lands and higher human impacts, e.g. chemical pollution from agriculture, degradation by goose-farming, cessation of natural processes/disturbances. These in turn caused the decline of wet meadows and marshes and a substantial loss of biodiversity. The rehabilitation of the EPMS is the largest and oldest of such programmes in Hungary and possibly in Europe as well, involving ca. 5000 ha and 30 years. In the first phase of rehabilitation (1976-1996) marsh hydrology was restored by the construction of a water supply system that has halted the drying of the marshes.

**Overall and specific objectives:** The overall objectives are to protect the marshes and grasslands from the threats and to reestablish spatial connections by restoring grasslands on alkaline flats and loess plateaus. The specific aim is to restore grasslands on 680 ha, of which at least 36 ha is loess steppic grassland and the rest is pannonic salt grassland (Natura 2000 priority habitat types). To reduce degradation of grasslands, goose-farming will be eliminated by purchasing 415 ha land around the farms. In addition, the project aims to increase habitat diversity in the entire landscape by afforestation on 70 ha and in marshes by grazing and burning edges on ca. 90 ha. Grazing by cattle will be applied on ca. 520 ha non-grazed grasslands and 300 ha marsh edges, and by sheep on ca. 300 ha degraded grasslands. Finally, the project aims to benefit Bird Directive Annex I raptors and waterbirds by extensive cultivation of 188 ha to enhance prey populations and feeding sites.

**Site involved and habitat types/species targeted:** The site involved by the project is a 5000-ha area of the EPMS (entire project area SPA, most pSCI, World Heritage Site, Ramsar Site etc.). The project aims to benefit both Natura 2000 habitats (Habitat Directive Annex I priority habitat types 1530 and 6250) and species (Bird Directive Annex I species, e.g. *Falco tinnunculus*, *F. vespertinus*, *F. cherrug*, *Haliaeetus albicilla*, *Grus grus* etc., and several priority species: *Botaurus stellaris*, *Aythya nyroca*, *Aquila heliaca*).

**How did the project come about:** The long-term rehabilitation of the EPMS, laid out in several documents, consists of three phases, of which the current project is the second phase. This phase extends the marsh rehabilitation to a complex, landscape-level rehabilitation programme. 2004 was an excellent starting year, because several 10-yr rental contracts terminated that year and were renegotiated with project objectives enjoying priority.

**Socioeconomic context:** Most (85%) of the project area is owned by the state and managed by HNPD, which offered good chances for successful large-scale habitat management actions. Local farmers and farming companies renting these lands as well as farmers owning lands cooperate with HNPD in the restoration/management of these habitats and in the after-LIFE maintenance of the system. Although land is easy to buy in most of the project area, complex land ownership in one area makes land purchase progress slowly but steadily.

**Expected results:** 1650 ha habitat will be restored or managed according to the objectives. Land use will be irreversibly improved on 680 ha. Degrading effects will be eliminated on 300 ha, grazing is extended to 520 ha. Heavy use and human impact on the area will substantially decrease. Increased availability of natural habitats, better land use structure and more diverse habitats will result in favourable conservation status for the entire landscape. The various restoration and management actions will benefit populations of many species of Community interest. The project will serve as a model for adaptive ecosystem management in Europe.

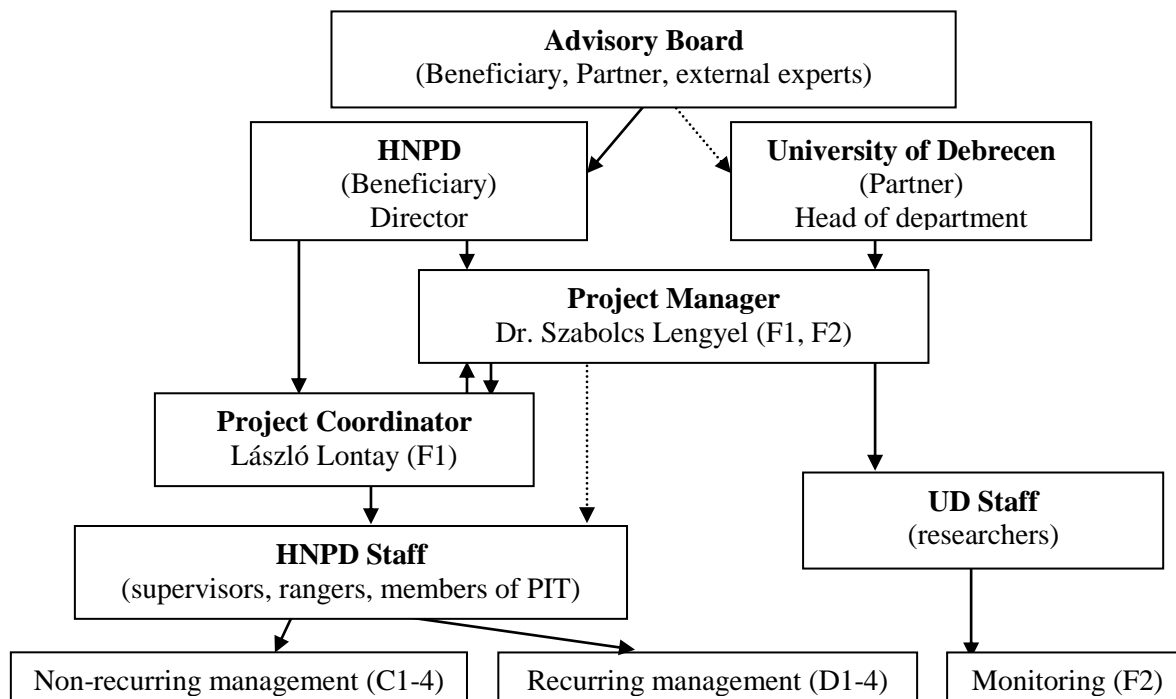


## 5. LIFE-PROJECT FRAMEWORK

**Working method: project actions, subactions and planning:** The project applies five main actions: two habitat restoration actions (grassland restoration, C1; afforestation, C2 and D3) and three habitat management actions (grazing, D1 and D2/1; fire management D2/2; extensive wildlife lands, D4) to improve the conservation status of the EPMS. Smaller actions include establishing infrastructure for habitat management (purchase of livestock, C3; construction of infrastructure for grazing, C4) or follow-up treatments (management of wooded areas, D3). Preparatory actions are necessary for habitat restoration and management (baseline assessment of target habitats, A2; development of management plans, A3), and land purchase is necessary to eliminate degradation or to implement restoration (A1, B1, B2). Actions were planned along two ways. First, modern concepts of conservation biology (e.g. ecological corridors, buffer zones, habitat mosaics) were applied to design actions to reduce or eliminate as many threats as possible within the scope manageable. Second, actions were designed to increase the diversity of habitats at the landscape level to increase biodiversity, resulting in various actions with variable targets and measures.

### Presentation of Beneficiary, partners and project-organisation:

HNPB (Beneficiary) is a regional government body administering all protected areas in NE Hungary. UD (Partner) is a premiere higher-education regional institute. The project organigram is:



Tasks are divided between the Project Coordinator (everyday project coordination, preparation of meetings/negotiations, overseeing field actions, working with local stakeholders, record-keeping) and the Project Manager (overall planning, scheduling, evaluation of progress, strategic negotiations, report-writing and presentations). HNPB staff and UD researchers participate in project implementation teams organised for specific actions.

**Modifications in project:** Several technical changes and related financial changes are subject to a request for project modification. One preparatory action has been conducted by the Beneficiary rather than by the Partner. Lands to be purchased are proposed to reduce because some lands had previously been owned by the state. Goose-farming is proposed to be eliminated by buying lands but not the farms themselves. Project organisation changes because the PC was employed by HNPB for the project duration (foreseen as Ext. Assistance in the revised application). The modification has not yet been officially accepted by the Commission.



## 6. PROGRESS, RESULTS

For the geographic location of entities named in the actions, please see **Map 1**.

### 6.1. “A” PREPARATORY ACTIONS/MANAGEMENT PLAN PREPARATION

#### A.1: Preparation for land and farm purchase

No.	Activity	Output	Status with date of start/completion)	Responsible person
1.	Participating in tender for large Villongó area	175 ha land contracted	Completed 30/09/2004	L. Megyery, PC
2.	Assembling all information on landowners	Database on all lands to be purchased	Completed 30/11/2004	PC, L. Megyery
3.	Organising meeting for landowners, stakeholders	Village forum in Egyek (64 participants)	Completed 24/02/2005	PC, L. Megyery, PM
4.	Prep., negotiations for 2nd large Villongó area	76 ha land contracted	Completed 31/07/2005	L. Megyery, PC
5.	Prep., negotiations for 3rd large Villongó area	Final 54 ha land in given area contracted	Completed 31/08/2005	L. Megyery, PC
6.	Contact with landowners in Csattag area (Egyek)	Letters to 180 persons, numerous phone calls	Completed 31/08/2005	L. Megyery, PC
7.	Negotiations with owners in Bőgő marsh area	8 ha land contracted	Completed 30/06/2006	L. Megyery, PC
8.	Negotiations with landowners in Csattag area	Many small land parcels purchased	In progress, started 01/09/2005	L. Megyery, PC
9.	Contact with landowners in all remaining areas	Letters, phone calls to 20 landowners	In progress, started 01/07/2006	L. Megyery, PC

We expected from this action that “the land and farm purchases will go smoothly, efficiently and in a timely manner, and that the purchase of a total of 730 ha of land and farm will provide the very basis for other, management-type, actions.” (hereafter a citation of the “Expected results” section from the revised application will start the description of each action).

The preparations for the purchase of Villongó grasslands progressed without substantial problems or delays. Landowners were especially cooperative near Bőgő marsh, where two-thirds of the target lands were purchased in spring 2006. Due to complex land ownership near Csattag marsh, the preparatory action has taken more time and work here than foreseen in the revised application. Many of the landowners have deceased or moved to unknown addresses and some do not even know of their property. There are still many owners who could not be contacted despite repeated efforts. The indicators to test performance are (i) the number of contracts prepared (over 60 contracts completed), (ii) land parcels purchased (18 parcels consisting of 288 subparcels in Villongó, 5 parcels near Bőgő, 1 parcel near Kis-Jusztus and 28 parcels near Csattag), and area purchased (305 ha in Villongó, 8 ha near Bőgő, 4.6 ha near Kis-Jusztus and 20.4 ha near Csattag).

In summary, 339 ha land has been purchased in actions B.1 and B.2 until 31/08/2006 (please see table below), and the preparations for these purchases all belong to action A.1.



Area name	Action	Project modified target (ha) <sup>a</sup>	Purchased in project (ha) <sup>b</sup>	%
Bőgő	B1	12.11	8.0143	66.2
Csattag <sup>c</sup>	B1	74.44	20.4389	27.5
Hagymás	B1	13.12	-	0
Kis-Jusztus North	B1	15.88	4.6261	29.1
<i>B.1 Subtotal:</i>		115.55	33.0793	28.6
Villongó	B2	414.95	305.3646	73.6
<i>Total:</i>		530.50	338.4439	63.8

<sup>a</sup> After adjustment with lands previously owned by the state, and based on request for project modification to reduce area of purchase.

<sup>b</sup> Lands purchased and contracts recorded in or submitted to Land Registry as of 31/08/2006.

<sup>c</sup> The purchase of an additional 7.9 ha is prepared and is in the contracting phase.

This action required more work than foreseen for various reasons. The compilation of the list of landowners, especially in the Csattag area took several months. The notification of landowners has progressed slow due to the high number of people moving or deceased. Experience suggest that for successful purchases, negotiations in person are necessary with the landowners, who are often elderly people, which thus takes a lot of time and travel. In some cases, they also need to be transported by car to the lawyer's office in Debrecen to sign the purchase contracts. These are the reasons for relatively high Travel and External assistance costs. The initial compilation of landowners' lists (922 € EA) and associated travel (669 € TR) is considered under this action, whereas the rest of the preparatory work is considered under B1 and B2.

A decree by the Director of HNPD (signed 16/05/2005, see more on this in F.1) appointed Mr. L. Megyery as land purchase coordinator for land purchases in this LIFE-project. Mr. Megyery has been responsible within HNPD for land purchases in the Hortobágy region since 1990. The decree also laid out detailed responsibilities related to land purchase (preparation, contacts, negotiations, before-purchase and after-purchase land registry work, HNPD recordkeeping procedures etc.) and a sharing of these tasks between the land purchase coordinator and the law office representing HNPD.

## A.2: Inventory of plant species and communities on native grasslands

No.	Activity	Output	Status with date of start/completion	Responsible person
1.	Field survey of vegetation	Updated habitat map	Completed 31/10/2004	PM, researchers
2.	Systematic sampling of plants, invertebrates, birds	Data on flora and relevant fauna	Completed 30/11/2004	PM, researchers
3.	Data processing, report-writing	Report on species and communities inventory	Completed 31/03/2005	PM, researchers
4.	Interpretation of results	Inferences regarding habitat restoration and management	Completed 31/07/2005	PM
5.	Preparation of map of potential habitats in EPMS	Potential habitat map digitised, commented, completed	Completed 30/11/2006	PM



The expected results from this action were “seventy 2\*2-m quadrats will be surveyed on ca. 540 ha native grasslands. Data on species and communities will be used to select key species for grassland restoration and to judge the success of restoration.”

The inventory of species and communities was conducted in 2004 by the involvement of five researchers. Field-work was conducted throughout the vegetation period, with detailed study of plant associations twice in 2004 (early June and late July). During the study, 274 quadrats (2x2 m) were surveyed in 54 characteristic habitat patches. The sampling of plant-dwelling and soil surface-dwelling invertebrates was conducted by sweep-netting in 60 patches and by Barber ground-traps in 29 patches. Finally, point counts of birds were carried out in 60 patches. In summary, the area studied encompassed ca. 1600 ha and the number of quadrats was also well above that foreseen in the revised application, without a concurrent increase in costs.

The results, presented in a report entitled “Baseline assessment of major terrestrial habitat types of the EPMS”, revealed that both the species diversity and community diversity of the areas studied are higher than previously expected. A total of 30 plant associations or association-ranked consociations/stands have been identified and the composition and abundance patterns within each association were described. A total of 439 species were detected in the habitat patches studied. Plants were represented by 196 species, whereas 177 invertebrate species were found, of which most species were Carabidae beetles (67 species) and spiders (51 species), whereas 31 Orthopteran, 19 Hemipteran and 9 Homopteran species were also detected. Finally, 66 bird species were observed to use the habitat patches. Several species of conservation or biogeographical interest have been found (e.g. two spider species new to the fauna of Hungary, four beetle species with less than 5 records from Hungary in the last 100 years) and the data can be used in evaluating the success of the actual grassland restoration activities in the project. The baseline assessment report is attached in **Annex 5.1** to the Interim Report.

This action was conducted by the Beneficiary and not by the Partner, as foreseen in the revised application due to delay on the Partner side to sign the Partnership Agreement. This change is subject to HNPD's request for project modification. Apart from which project participant contracted the researchers, the action was carried out in full accordance with the plans, including the expenditures. The indicators used to test performance include number of habitat patches surveyed (54), number of quadrats surveyed (264) or number of presentations using the data from this assessment (3 talks, 1 scientific manuscript, 1 report).

The costs of this action were as planned and consisted of subcontracting the field and laboratory research work to researchers (5960 € EA).

### **A.3: Developing management plans for restored grasslands and wooded areas**

<b>No.</b>	<b>Activity</b>	<b>Output</b>	<b>Status with date of start/completion</b>	<b>Responsible person</b>
1.	Developing technical implementation and management plan for grassland restoration	First draft of technical implementation and management plan (TIMPGR)	Completed 31/01/2005	PM
2.	Reviewing of first draft of TIMPGR	3 meetings with HNPD and external experts	Completed 28/02/2005	PM, PC
3.	Incorporating comments by experts	Second draft of TIMPGR	Completed 30/03/2005	PM



4.	Commenting on second draft of TIMPGR	6 meetings with local stakeholders (PBC, Nagyiván Agricultural Ltd., private farmers)	Completed 30/04/2005	PM, PC
5.	Assembling information on lands for habitat restoration and management	Land-registry-based database on all field actions of the project	Completed 15/05/2005	PC
6.	Preparation of final draft of TIMPGR	Final version of TIMPGR	Completed 30/06/2005	PM
7.	Field survey of lands planned for afforestation, 2 meetings on technology	Official habitat evaluation study (part of FIMP) for 6 sites	Completed 31/07/2005	PC, I. Mihalik, subcontractor1
8.	Drafting of afforestation management plan and negotiations	Forest implementation and management plan (FIMP) for 4 of 6 sites	Completed 31/07/2005	PC, I. Mihalik, subcontractor1
9.	Negotiations and field surveys of lands to be divided for afforestation	3 on-site meetings with land registry officials	Completed 30/11/2005	PC, I. Mihalik, subcontractor2
10.	Field survey (measurement of geodata for division of land parcels)	Basis outline map for land division completed	Completed 30/04/2006	PC, subcontractor2
11.	Land Registry official process of land division	Final resolution on division of land reg. no.	Completed 31/05/2006	PC, subcontractor2,
12.	Drafting of afforestation management plan	FIMP completed for remaining two sites	In progress, expected 31/10/06	PC, subcontractor1
13.	Submission of FIMP to forestry authority	Approval of FIMP for each site	In progress, expected 30/11/06	PC, I. Mihalik

The Expected results in this action were that “two management plans will contain detailed plans to manage ca. 85 ha loess steppic grasslands, ca. 585 ha salt steppes and ca. 70 ha wooded areas that are planned to be restored or created in this project.”

The technical implementation and management plan for grassland restoration (TIMPGR) has been completed by 30/06/2005 (please see **Annex 5.2**). HNPd is putting a special emphasis on working with local stakeholders in the framework of collaborative management, thus, the TIMPGR was also discussed with all stakeholders (NAC, PBC, and 15 private farmers), which caused some delay in the completion of the plan. By principle, requests by stakeholders were considered only if the changes involved greater conservation benefits than the original plans (please see request for project modification).

By law, the official forest implementation and management plan (FIMP) for each wooded area needs to consist of (i) habitat evaluation study and (ii) an implementation plan, both prepared by an authorised forestry company (subcontractor). Habitat evaluations were completed for each of the six sites on time. Official implementation plans in Hungary can by law be prepared only for land parcels bearing their own land registry numbers. For this reason, the implementation plan could be completed for six parcels at four sites, but two parcels had to be divided for official forest planning to progress. The division of land parcels caused some extra work (please see table above). The basis outline map (completed by 30/04/2006) was satisfactory for this purpose, thus, by 31/10/2006, the FIMP for the remaining two sites could also be completed (please see **Annex 5.3**).



As an unforeseen activity parallel to the development of the management plans, a partly georeferenced database on each action by land registry numbers, landowners/users, renters etc. has been compiled, which greatly helped the technical planning, management decisions and negotiations with stakeholders.

The action progressed mostly as foreseen. A delay was caused by the legal requirement that official forest implementation plans can be developed only for parcels under separate land registry numbers and such a division of two lands has taken ca. 1 year. However, this delay has not caused further problems as afforestation was foreseen only in autumn 2006 in the revised application. There are no specific indicators for this action other than the plans completed. Both the TIMPGR and the official FIMP completed are attached in Annex to this report (**A.5.2., 5.3**).

Most of the costs of this action was subcontracting the development of the grassland restoration management plan (1350 € EA), and they also involved travel to discuss the plans with stakeholders (338 € TR) and collection of professional literature by purchasing books (92 € CM) and photocopy (36 € EA).

## 6.2. “B” PURCHASE/LEASE OF LAND AND/OR RIGHTS

### B.1: Purchase of land to create buffer zones and ecological corridors

No.	Activity	Output	Status with date of start/completion	Responsible person
1.	Contracting with owners of 4.6 ha near Kis-Jusztus	4.6 ha land purchased	Completed 30/06/2005	L. Megyery, PC
2.	Contracting with 1 <sup>st</sup> group of owners in Csattag area	5.2 ha land purchased	Completed 31/08/2005	L. Megyery, PC
3.	Contracting with 2 <sup>nd</sup> group of owners in Csattag area	11.4 ha land purchased	Completed 31/01/2006	L. Megyery, PC
4.	Contracting with 1 <sup>st</sup> group of owners in Bögő area	8.0 ha land purchased	Completed 30/06/2006	L. Megyery, PC
5.	Contracting with 3 <sup>rd</sup> group of owners in Csattag area	3.7 ha land purchased	Completed 31/08/2006	L. Megyery, PC
6.	Contracting with 4 <sup>th</sup> group of owners in Csattag area	7.9 ha land will be purchased	In progress, expected 31/10/06	L. Megyery, PC

We expected that “By becoming the owner and manager of the land, Hortobágy National Park Directorate will be able to manage the lands so as to maximise their conservation benefits. Ca. 215 ha buffer zones will protect rehabilitated marshes and two ecological corridors will establish spatial connections between the northern and southern grasslands.”

Land purchase in B.1 is taking place in three areas, the Kis-Jusztus, the Bögő and the Csattag area according to the request for project modification (**Map 2.**). In the Kis-Jusztus area, HNPD purchased 4.6 ha, and two land parcels (9 ha) are left to be purchased and in the Bögő marsh area, 8 ha land has been purchased, and one land parcel (4 ha) is left to be purchased. In the Csattag area (Egyek village), HNPD has purchased 20.3 ha arable until 31/08/2006 and a further 7.9 ha is in the contracting phase (**Map 3.**). Farmers have indicated willingness to sell a further 5.5 ha. Many of the lands were purchased after voluntary offering of the owners for purchase and there are still 69 landowners not contacted (or 32% of 215 total). One of two owners not willing to sell land at the time of Progress Report 1 has changed his mind and now sells HNPD all his land except for two



parcels, where he sells a 80-m wide area necessary for grassland restoration. The only farmer not willing to sell land (5.5 ha) appears convincible to swap nearby lands purchased in this project within the project area in return to letting HNPDP conduct the restoration. Many landowners, involving ca. one-third of the total area planned for purchase here (68 ha), however, still cannot be identified, especially in Land Registry No. 0820 (S part). HNPDP will initiate the legal procedure to overtake these lands as soon as their legal status becomes clear. Many of these parcels are abandoned, and naturally revegetating, especially in the S end of the buffer zone, which may decrease the area where grasslands need to be restored (**Map 3**).

Land purchase is progressing slower than foreseen in the revised application due to complex land ownership near Csattag marsh. However, recent progress and current negotiations suggest that HNPDP will complete the purchase of all lands that can be purchased likely until the summer of 2007. Such a date of completion will give enough time to initiate and complete the legal process to overtake lands with unknown owners and to acquire management rights from the National Land Fund before the grassland restoration, scheduled for autumn 2008. Land prices for arable lands in the Csattag area are still within the estimates foreseen in the revised application. Land price estimates at the time of recent purchases are attached in **Annex 2.1**. The indicators to test performance are (i) the number of contracts prepared (over 50 contracts completed in this action), (ii) land parcels purchased (1 parcel near Kis-Jusztus, 5 parcels near Bögő and 28 parcels near Csattag), and area purchased (4.6 ha near Kis-Jusztus, 8 ha near Bögő and 20.4 ha near Csattag).

The costs of this action mostly include the price paid for the lands (23 665 € LP). Most of the preparatory and land registry work necessary for B1 and B2 actually occurred in B1 due to the reasons discussed above, therefore, we present the combined costs in this action. Land purchase preparation and land registry work (7565 € EA) and legal assistance (1600 € EA) were subcontracted to the land purchase coordinator and the lawyer providing such services. Travel to arrange land purchases amounted to 2900 €. Most of these travel costs were by L. Megyery, who was an employee of HNPDP at project start date but was employed through subcontracts after his retirement on 01/01/2005. However, to keep costs low and controllable, HNPDP continued to record travel costs necessary for land purchase under Travel (please see Chapter 9 for further justification).

## **B.2: Purchasing lands surrounding farms to eliminate goose-farming**

<b>No.</b>	<b>Activity</b>	<b>Output</b>	<b>Status with date of start/completion</b>	<b>Responsible person</b>
1.	Contracting with first group of owners in Villongó area	174.9 ha land purchased	Completed 10/09/2004	L. Megyery, PC
2.	Contracting with second group of owners in Villongó area	76.4 ha land purchased	Completed 28/02/2005	L. Megyery, PC
3.	Contracting with third group of owners in Villongó area	54.0 ha land purchased	Completed 31/07/2005	L. Megyery, PC

In this action, we expected that “Two goose farms will be purchased and transformed for sheep farming. Almost 500 ha of seriously degraded grasslands also will be purchased and a slow regeneration after the heavy impact by domestic geese will be started by sheep grazing.”

The objective of action B.2 was to eliminate goose-farming that seriously degrades grasslands from the Villongó area. This objective has been fulfilled by the summer of 2005, when goose-farming



disappeared from the Villongó area as a result of intensive land purchase activity by HNPD. A total of 306 ha land was purchased within the project. In addition, 74.8 ha was already managed by HNPD at the project start date, increasing the total area managed by HNPD to 387.3 ha. The elimination of goose farms has been reached by purchasing all lands around the farms, although the goose farms originally planned for purchase were not bought (subject to project modification). HNPD now owns all lands neighbouring the farms (**Map 4.**) and rents the lands only for sheep-farming. In the larger farm (northern one), the owner has agreed to the new conditions and keeps sheep in the farm, and takes care of grazing the degraded grasslands by sheep (action D.1). The smaller farm has been abandoned since summer 2005.

The Villongó grasslands could be purchased at higher prices than foreseen. This was especially so in the first round, when HNPD had to participate in a bidding negotiation due to the bankruptcy of the owner (please see Progress Report 1). In the second and third rounds, more reasonable prices could be negotiated. Official valuation documents of the lands involved in land purchase activities are attached in **Annex 2.1** to this report. Still, because the aim of action B.2 has been reached and because of high expenditure in the first round HNPD will continue buying lands if funds are saved elsewhere. Indicators to test performance are (i) the number of contracts prepared (8 contracts completed), (ii) land parcels purchased (288 parcels in Villongó), and area purchased (306 ha).

### 6.3. "C" NON-RECURRING BIOTOPE MANAGEMENT

#### C.1: Transformation of arable lands into grasslands

No.	Activity	Output	Status with date of start/completion	Responsible person
1.	5 meetings with stakeholder (with minutes signed by stakeholders)	TIMPGR and yearly scheduling of grassland restoration agreed with every stakeholder	Completed 30/06/2005	PC, PM
2.	Harvesting of seeds for grassland restoration	4.05 t mixed seeds harvested on 26 ha in 4 sites	Completed 30/06/2005	PC, I. Kapocsi, subcontractors
3.	Cleaning (flailing) of seeds	1.6 t <i>F. pseudovina</i> , 409 kg <i>F. rupicola</i> cleaned seeds available	Completed 31/08/2005	PC, I. Kapocsi, subcontractor
4.	Purchase of seeds from commercial sources	1.6 t <i>Poa angustifolia</i> , 500 kg <i>Bromus inermis</i> seeds available	Completed 31/08/2005	PC
5.	Preparation of loess and alkaline seed mixtures	2.4 t alkaline and 1.02 t loess seed mixture available for restoration	Completed 09/23/2005	PC, volunteers
6.	Soil preparation (min. 5 rounds per site)	178 ha land prepared for seeding	Completed 09/23/2005	PC, subcontractor
7.	Seeding lands with appropriate seed mixture	51 ha seeded with loess mixture, 127 ha with alkaline mixture	Completed 05/10/2005	PC, subcontractor
8.	Mechanical weed control by mowing	161 ha restored land mowed (rest is flooded)	Completed 30/06/2006	PC, subcontractor
9.	Seed harvest for 2006 grassland restoration	3.1 t seeds harvested on 53.5 ha in 3 sites	Completed 30/06/2006	PC, I. Kapocsi, subcontractors



10.	Cleaning (flailing) of seeds	2.07 t <i>F. pseudovina</i> , 200 kg <i>F. rupicola</i> seeds available	Completed 31/08/2005	PC, I. Kapocsi, subcontractor
11.	Purchase of seeds from commercial sources	2.3 t <i>Poa angustifolia</i> , 2.2 t <i>F. pseudovina</i> , 100 kg <i>Bromus inermis</i> seeds available	Completed 15/09/2006	PC
12.	Preparation of loess and alkaline seed mixtures	5.9 t alkaline and 560 kg loess seed mixture available for restoration	Completed 15/09/2006	PC, volunteers
13.	Soil preparation (min. 5 rounds per site)	252 ha land prepared for seeding	Completed 30/09/2006	PC, subcontractors
14.	Seeding lands with appropriate seed mixture	19 ha seeded with loess mixture, 233 ha with alkaline mixture	Completed 06/10/2006	PC, subcontractors

In this action, we expected that “A total of 668 ha of grasslands will be restored on current arable lands, of which 85 ha will be pannonic loess steppic grasslands and 583 ha will be pannonic salt steppes. Runoff and infiltration of chemicals to marshes will be reduced and the natural zonation of plant associations will be restored on the edges of marshes. It is likely that the natural recolonisation of natural grassland communities will be significantly accelerated. The effects of fragmentation of grasslands will decrease and populations of many grassland plants and animals will benefit from higher habitat availability. Several waterbirds (breeding birds: *Aythya nyroca*, *Botaurus stellaris*, *Tringa glareola*, *Egretta alba*, *Ardea purpurea*, *Ciconia ciconia*, *Platalea leucorodia*, *Himantopus himantopus*, *Recurvirostra avosetta*; migratory birds: *Pluvialis apricaria*, *Philomachus pugnax*, *Chlidonias niger*, *Chlidonias hybridus* etc.) are expected to directly benefit from this action because edges of marshes will become less sharp when bordered by grasslands than when by ploughed fields, which can lead to higher connectivity of marsh patches, and restored grasslands will provide feeding sites for ducks, geese, herons and some waders.”

The original objective of the action was increased to restore grasslands on 680 ha arable land. Within this area, the aim was to start the restoration of loess steppic grasslands (the most vulnerable terrestrial ecosystem in Hungary) on at least 36 ha but ideally up to 85 ha land. In 2005, grasslands were restored on 178 ha (**Map 5.**), and of this, 51 ha was loess grasslands (Natura 2000 code 6250). In 2006, grasslands were restored on 225 ha, of which loess grasslands constituted 19 ha. Thus, in the first two full years of the project, grassland restoration occurred on 403 ha or on 59% of the total planned for the four years (680 ha). It is an even more important result that loess grassland restoration has been started on a total of 70 ha or 82% of the ideal case foreseen in the revised application (85 ha) or almost twice as much as the worst-case scenario of 36 ha. On the rest of the area (333 ha), alkaline grasslands (salt steppic grasslands, Natura 2000 code 1530) were restored. In summary, this action is ahead of the plans and can be considered highly successful.

The germination of *Festuca* plants was quite successful in the autumn of 2005, when, soon after seeding, much precipitation fell to the area, enhancing the young sprouts. In the spring, especially the wetter areas or areas partially in the shade were green with *Festuca* and other seeded species. Weeds soon overgrew the grasses, which provided benefits to *Festuca* growth by protecting them from the sun. When weeds were mowed in June, 2006, swards, sometimes closed stands, were found to be dominated by *Festuca* and other species. Botanical studies also suggested a faster-than-expected success of restoration (see Technical Report by Partner, action F2).

The costs of this action are below that foreseen because HNPD could acquire seeds from mowing in appropriate areas rather than from buying from commercial sources, therefore, a substantial amount



of money was saved. The saving was larger in 2005 than in 2006, when considerably more of the alkaline seed mixture was necessary and the amount of *F. pseudovina* seeds was not sufficient for the entire area. The indicator for this action is land surface with grasslands restored (70 ha loess, 333 alkaline grasslands, total 403 ha).

The costs of this action mainly included the price of seeds necessary for the restoration (66 955 € CM) and subcontracting the necessary field work to farmers/farming companies (52 527 €). The latter included 2368 € for seed harvesting, cleaning and transporting and 50 158 € for soil preparation, seeding and mowing the next year. Significant amount of funds were saved by harvesting *F. pseudovina* seeds in nearby Hortobágy areas instead of purchasing them from commercial sources in both 2005 and 2006. Travel exclusively in this action was 590 €, whereas another ca. 800 € have been spent on multipurpose travel (travels involving several actions) that also included activities in this action.

## C.2: Creation of wooded areas as woodland mosaics, buffer zones and nesting sites

No.	Activity	Output	Status with date of start/completion	Responsible person
1.	2 meetings with stakeholders (with minutes signed by stakeholders)	Afforestation plans agreed by stakeholders	Completed 15/05/2005	PC, I. Mihalik
2.	Field survey of lands planned for afforestation, 2 meetings on technology	Habitat evaluation study conducted for all six sites	Completed 31/07/2005	PC, I. Mihalik, subcontractor1
3.	Purchase of acorns	6.6 t of acorns available for planting	Completed 15/11/2005	PC, I. Mihalik
4.	Preparation of soil for acorn planting	22 ha land prepared for planting	Completed 30/11/2005	PC, I. Mihalik, subcontractor2
5.	Acorn planting	Plantation on 22 ha	Completed 10/12/2005	PC, I. Mihalik, subcontractor3
6.	Weed control by mowing	Weeds reduced (22 ha)	Completed 30/06/2006	PC, subcontractor2
7.	Seedling germination and raising from acorns	Ca. 30 000 seedlings available for planting in fall 2006	Completed 31/08/2006	PC, I. Mihalik, subcontractor4
8.	Purchase of acorns	acorns for planting (quantity unknown yet)	In progress, started 09/15/2006	PC, I. Mihalik

In this action, we expected that “70 ha of wooded areas will be created in two sites. The wooded areas will increase the diversity of habitats in the project area and it is very likely that more Annex I bird species will use the area and that their populations will increase.”

Beyond the FIMP developed in action A.3, a firm plan for afforestation in each target area was formulated during the discussions. Furthermore, the total area of afforestation was increased to 80 ha and HNPD decided to start this action one year earlier than foreseen in the revised application. The reason was that both the implementation planning and experience from nearby afforestations suggested that the success rate of afforestation varies greatly by the soils involved and by the general region. Starting earlier in some sites may thus enable HNPD to detect problems early and to compensate for potential problems. Therefore, afforestation was started in autumn 2005 on three sites on 22 ha in the E part of the project area (**Map 6.**). In summary, this action is earlier than



scheduled. The indicators for this action are the surface area of afforestation (22 ha) and proportion of acorns germinating (germination success).

Experience from the autumn 2005 afforestation showed that germination success is very low because we estimated that on average 10% of the acorns have germinated. The low germination success can be explained by increased salinity of the soil and extremely high soil water levels in fall 2005. For example, the two plots could not be approached by machinery throughout most of 2005 and 2006 (including at the time of the project visit, when we could not show these plots to the visiting team due to inaccessibility). Considering also that further loss can be expected, replacement of the succumbed acorns by new ones is necessary in many places. This will not lead to extra costs as replacement of seedlings has been foreseen in D.3. As an experiment, we also used part of the acorns bought in autumn 2005 for germinating in a greenhouse and will plant these seedlings in autumn 2006. The idea behind is that we may achieve higher success with planting seedlings than with planting acorns. The low germination success is thus not a cause of concern at this stage of the project as it is probably too early to judge the success of this action.

High water levels due to extremely wet weather in 2006 may cause delay in afforestation at one of the six sites. Part of the westernmost site (just W of Kis-Jusztus marsh, 24 ha) is still under water as of September, 2006. If water does not recede until November, HNPD will complete afforestation on the dry parts of the plot and will complete afforestation on the rest when water recedes next year.

The costs of this action mostly included the price of acorns for fall 2005 afforestation (8694 € CM) and subcontracting soil preparation and planting of acorns (3268 € EA). Travel exclusively in this action was 92 €, but activities in this action were also the purpose of another 633 € spent on multi-action Travel.

### C.3: Purchasing livestock to ensure long-term maintenance of grasslands

No.	Activity	Output	Status with date of start/completion	Responsible person
1.	Preparation of public tender for cattle purchase	4 meetings, list of specifications discussed	Completed 30/04/2006	PC, PM
2.	Public tender (simplified procurement procedure) opens	Letters sent to potential participants	Completed 03/05/2006	PC
3.	Tender closes, opening of offers	Three offers submitted, selection of best price offer, notification of participants	Completed 03/07/2006	PC, PM, HNPD directors
4.	Preparation of contract between company and HNPD	Contract signed by company and HNPD directors	Completed 25/07/2006	PC, PM, HNPD directors and lawyer
5.	Delivery-receiving of cattle	50 grey cattle inventoried by HNPD	In progress, expected 10/31/06	PC, PM, I. Sándor

In this action, we expected that “50 Hungarian grey cattle will be purchased and will be available to concentrate grazing effort into areas where needs are highest. The livestock will be used to graze previously ungrazed areas (ca. 220 ha), edges and peninsulas of marshes (see Action D.2), and some transformed grasslands should they become suitable for grazing during the project period.”



This action was carried out according to the plans. A slight delay in the signing of the contract (original date foreseen: 30/06/2006) was caused by a longer time necessary to assemble detailed specifications regarding the cattle and the public tender. Several specifications had to be considered due to animal health regulations, national husbandry requirements, grey cattle husbandry rules and requirements set by PBC as the winter keeper of the cattle, such as Hortobágy breed type, bio-qualified oxen, free from IBR and other infections etc. The lowest price of cattle offered (800 € without VAT) was slightly below to that foreseen in the revised application (900 €). There are no specific indicators for this action.

#### C.4: Construction of a fold for livestock

No.	Activity	Output	Status with date of start/completion	Responsible person
1.	Planning of grazing infrastructure	3 meetings with PBC on arrangements	Completed 31/01/2006	PC, PM, I. Sándor, PBC
2.	Public tender (simplified procurement procedure) for shepherds' home	Collecting price offers for containerhouse of specific design	Completed 22/02/2006	PC, PM
3.	Field visits to designate location of fold, well, shepherds' home	2 on-site meetings with PBC	Completed 31/03/2006	PC, PM, PBC
4.	Construction, transport and instalment of shepherds' home	2.5x7 m containerhouse ready and installed	Completed 10/04/2006	PC, subcontractor1
5.	Public tender (simplified procurement procedure) for fold	Two procedures (one for wooden poles, one for electric fence)	Completed 10/04/2006	PC, PM, PBC
6.	Construction of fold (wood poles, electric fence)	2-ha fold ready	Completed 25/04/2006	PC, subcontractor2
7.	Instalment of accessories to containerhouse	Gas system, electric system (solar panels), thatched roof, temp. toilet installed	Completed 30/04/2006 (roof: 31/08/2006)	PC, subcontractors 3-5
8.	Applying for permit for grazing to Szolnok co. office of Ministry of Environment and Water	Permit given for grazing	Completed 05/05/2006	PC
9.	Construction of ground-water well	Drilling and instalment of well	Completed 30/04/2006	PC, subcontractor6
10.	Construction of drinking trough and foundation	Drinking trough ready and installed in place	Completed 15/05/2006	PC, subcontractor7
11.	Applying for water rights permit to Szolnok co. office of Ministry of Environment and Water	Water rights permit to establish well and drinking trough	Completed 31/05/2006 (started 06/04/06)	PC, subcontractor6
12.	Overview of progress, negotiation on adjustments	2 on-site meetings with PBC	Completed 30/06/2006	PC, PM, I. Sándor, PBC

Th Expected result in this action was that "The fold and associated structures will provide housing for 100 grey cattle and accommodation for shepherds tending them."



This action took significantly more work and time than foreseen, but progressed on time because all important infrastructure were installed by the time cattle were brought to the area (27/04/2006, action D.1). Infrastructure installed included a 2-ha fold (enough to hold 200 grey cattle), a well and drinking troughs, shepherds' home (containerhouse with thatched roof) and some other structures (e.g. temporary toilet). This infrastructure (fold, shepherds' home) was foreseen in the revised application, although the entire system consisted of more components (e.g. shepherds' home also included a separate electric system using solar panels, a separate natural gas system for heating and cooking etc.), which were not specifically detailed in the revised application. Besides the existence of various infrastructure constructed, there are no specific indicators to test performance in this action. There were no problems or drawbacks in this action.

This action cost more money than foreseen. Most of the costs was the construction of grazing infrastructure (5186 € EA for fold, 4896 € for containerhouse, 2352 € for well, 1152 € for drinking troughs or a total 13 586 €), whereas the instalment of structures and preparation of other systems containerhouse (e.g. gas system, electric system, solar panels into containerhouse) amounted to 3635 € (EA). The electric fence system cost less than foreseen (3442 € DG) because there is no need to move it. Travel specific to this action was 362 €, whereas this action was one of the several purposes of travels that amounted to 122 €. The higher costs in this action are offset by the savings in D1, where similar costs were foreseen in the revised application.

#### 6.4. "D" RECURRING BIOTOPE MANAGEMENT

##### D.1: Management of native grasslands by grazing

No.	Activity	Output	Status with date of start/completion	Responsible person
1.	Two meetings with local farmers	Rental contracts renegotiated with two farmers grazing cattle in NW Csattag	Completed 31/03/2005	PC, S. Szabó
2.	Meeting with farmer owning large farm on rental conditions	Sheep-grazing near larger Villongó farm started	Completed 01/05/2005	PC, S. Szabó
3.	All lands purchased around Villongó farms	No geese present in smaller Villongó farm	01/05/2005	PC, S. Szabó
4.	On-site meeting with farmers about boundaries	Cattle grazing NW of Csattag marsh started	01/05/2005	PC, PM
5.	Meeting with farmers renting lands in S Villongó	Sheep-grazing in S Villongó area started	01/05/2006	PC, S. Szabó
6.	Meeting with local farmer grazing cattle NW Csattag	Rental contract renegotiated	30/09/2006	PC, S. Szabó

The Expected results of this action were that "The proportion of extensively grazed grasslands will greatly increase in the project area by the inclusion of ca. 700 ha new land in grazing. On ca. two-thirds of these lands sheep grazing will start a slow restoration process after degradation by goose farming and on one-third cattle grazing will create new kinds of grassland habitats."

The aim of this action was to extend grazing as the optimal way of management of Hortobágy grasslands to areas previously undergrazed or non-grazed (**Map 7.**). This action has been



implemented by the involvement of local farmers in the grazing scheme, which has been a highly optimal and sustainable way. Following several meetings, four private farmers and one group of farmers now rents areas for grazing in the two areas targeted by this action (ca. 220 ha NW of Csattag, and ca. 400 ha in Villongó area, **Map 7.**). The Csattag area is divided into three parts; one local farmer keeping livestock in Szabó-tanya near the Salt Road grazes ca. 40 ha grasslands and 24 ha marsh (the latter as part of action D.2) and the other farmer (based in Félhalom) grazes ca. 117 ha, and a group of farmers from Egyek village grazes ca. 64 ha. The Villongó area is divided between two farmers. The owner of the larger farm now keeps only sheep, which graze on ca. 200 ha. Part of the area S of the large farm are rented by farmers who started sheep-grazing in 2006 on ca. 40 ha and who plan to extend sheep-grazing to the entire plot of ca. 200 ha in 2007. All farmers have agreed to conduct grazing according to the project priorities, as laid out in the rental contracts.

The plans have been implemented by involving local farmers through rental contracts. The grazing system is highly sustainable as the farmers plan for the long-term. For example, three farmers have recently invested considerable resources in constructing additional grazing infrastructure (barns, folds etc.). The indicators to test performance in this action are surface area included in the grazing system (currently ca. 460 ha) and number of farmers participating in maintaining the system (currently, four farmers and one group of farmers). There are no problems in this action. On the contrary, the solution found is likely to be successful in sustaining the grazing system well beyond the current LIFE project.

There were substantial savings in this action compared to the costs foreseen in the revised application. The External Assistance foreseen in D1 (10 800 € EA) is used partly in C4 (for constructions) and in D2 (costs of keeping cattle), and the durable good planned (electric fence, 7850 €) will be used in D2. Travel necessary to contact, negotiate with and regularly visit the farmers participating amounted to 268 €, and these activities were partly involved in 715 € worth of travel.

## **D.2: Using grazing and fire to increase habitat diversity in marshes**

The expected results in this action were as follows: “By opening up homogenised reedbeds it will be possible for other wetland species to take foot in the gaps created by grazing and/or burning. Grazing also will cause heavy trampling, which is likely to make the soil less suitable for plant growth, and the area more suitable for wading birds. Burning, besides creating physical space for plant growth, also will be likely to release chemical elements and ions the availability of which will further boost plant growth. Reed burning greatly reduces reed when conducted properly, and habitat diversity considerably increases after fire. Spatially more complex habitats follow fire, and as structural diversity of the habitat increases, many plants (e.g. tussock-forming sedge *Carex* spp. and aquatic and semi-aquatic macrophytes) will appear in the burned area, where only reed (*Phragmites communis*) thrived before. This will lead to a different insect fauna, and colonisation by several small passerine birds is expected. Possible damages can be envisioned when burning cannot be conducted or is not complete, e.g. only the top of reed can be burned, but no other specific damages are expected. Both of the effects are likely to lead to new physical characters and plant associations, which will increase the diversity of marsh habitats.” The action consists of two sub-actions.

### *Sub-action D.2/1: Grazing to increase habitat diversity in marshes*

No.	Activity	Output	Status with date of start/completion	Responsible person
1.	Four meetings with stakeholders (PBC, farmers, reed-cutters)	Rental contracts renegotiated, areas redistributed	Completed 31/03/2005	PC, S. Szabó



2.	Signing of minutes and new rental contracts (i.e. implementation and scheduling plan)	Stakeholders agree on forming a contiguous grazing area of ca. 300 ha near/in Fekete-rét	Completed 30/06/2005	PC, S. Szabó
3.	Sheep-grazing near Meggyes marsh	300 sheep graze lands E and S from the marsh	Completed 30/09/2005	PC, S. Szabó
4.	Two on-site meetings with PBC on determining areas and grazing pressure	Spatial extent and technology of grazing agreed by HNP, PBC	Completed 30/04/2006	PC, PM, I. Sándor, PBC
5.	Transfer of cattle to site by PBC	183 grey cattle start grazing on ca. 300 ha in/near Feketerét marsh	Completed 27/04/2006	PC, PBC
6.	Negotiations with NAC on grazing around Meggyes marsh	Grazing system near Meggyes marsh agreed by NAC and HNP	Completed 31/05/2006	PC, S. Szabó
7.	NAC purchases Nagy-Jusztus farm, brings 83 cattle	Grazing edges of Meggyes marsh starts	Completed 01/06/2006	PC, S. Szabó
8.	Spring grazing period over	Grey cattle taken away from Fekete-rét area	Completed 15/06/2006	PC, PBC
9.	Summer grazing schedule with fewer cattle	80 mixed cattle grazing in smaller area	Going until ca. 15/08/2006	PC, private farmer
10.	Autumn grazing schedule	Band increasing to 170 cattle, back to 300 ha	31/08/2006, still ongoing as of 10/10	PC, private farmer

This subaction aimed to introduce grazing by Hungarian grey cattle to marshes and marsh edges in W edge of Csattag marsh, around Meggyes marsh and around Fekete-rét marsh (**Map 7.**). In W Csattag marsh, grasslands bordering marshes have been rented to a local farmer keeping livestock in Szabó-tanya near the Salt Road within the project area, who takes care of the grazing of ca. 24 ha marsh edges W of Csattag marsh (see also D.1). The areas around Meggyes marsh were grazed by sheep owned by two private farmers in 2005. The center of grazing near Meggyes marsh, the Nagy-Jusztus farms, however, has been purchased by NAC in June 2006. A new rental contract was prepared in which NAC committed themselves to grazing the edge of Meggyes marsh, as well as some of the newly restored grasslands near the marsh (as soon as they are judged appropriate for grazing by botanists and agronomists) on a total of ca. 170 ha. The actually grazed area, which excluded grasslands restored in 2005, was ca. 68 ha (or 40%) of the total area in 2006, and will increase when restored lands become available for grazing.

The areas W and S of Fekete-rét marsh are the main focus of this sub-action. In a series of meetings with stakeholders on redistributing rented areas, an agreement was reached in which a contiguous grazing area of ca. 200 ha grasslands was formed mostly on the SW shore of Fekete-rét marsh but also involving marsh edges on three-quarters of the total edge length of the marsh (**Map 7.**). The marsh area actually grazed was initially unknown because we did not know how far cattle would venture in the marsh as there has been no such large marsh (600 ha) grazed by cattle before in Hortobágy.

A total of 183 grey cattle were brought by PBC to the area on 27/04/2006. The band quickly adapted to the new environment. Observations showed that besides grazing in the grasslands, grey cattle often went or ran into the marshes in groups of 30-40, and they remained there for several hours. Therefore, cattle grazed not only in the edges of the marsh, but also on small emerging or slightly submerged islands inside the marsh. By observing cattle in the marsh from emerging points



nearby, we estimated that cattle regularly roamed in at least 150 ha of marsh area and ventured up to 300-400 m farther inside the marsh (see **Map 7.**). The results of opening up the marshes were nothing short of spectacular (please see monitoring F.2). The total area available for grazing was ca. 350 ha (ca. 200 ha grassland, ca. 150 ha marsh). The actually used grassland area was smaller because an alkaline grassland restored in 2005 on 57 ha (action C.1) in the NW part of the area was not yet used for grazing. The spatial separation of action D.1 (grassland grazing) and D.2 (marsh grazing) near Fekete-rét marsh was difficult if not impossible due to hardly identifiable boundaries between grasslands and marshes. Because the basic idea behind grazing near Fekete-rét marsh was to open up reedbeds, the grazing activity in this area is presented under D.2.

In accordance with the plans foreseen, grey cattle were kept in the area until mid-June for the spring grazing. The grazing and trampling pressure by the 183 grey cattle for six weeks provided an important initial step in opening up the homogeneous reedbeds. In late June another local farmer brought 70 cattle (mixed band of grey cattle and the type Hungarian mixed breed) to the area and grazing was continued in a smaller area. In August, the same farmer brought more cattle, increasing the number gradually to 170, which again have been using the entire area for grazing (as autumn grazing). Thus, the scheduling of the grazing system adhered to the plans. The best indicator for testing performance of this system is the surface area (ha) where grazing on marsh edges was present. In the revised application, this action was planned at four sites on a total of ca. 350 ha. By involving local farmers near Csattag and Meggyes marshes, HNPD was able to concentrate all grazing effort to the Fekete-rét marsh area, which itself was ca. 350 ha. The total area of grazing in marsh edges was conducted on ca. 442 ha in 2006 (24 ha Csattag, ca. 68 ha Meggyes-marsh, ca. 350 ha Fekete-rét marsh), which was well above the plans foreseen. There were no problems with this action.

This action has so far cost less than foreseen. Some costs of keeping the cattle in the area are expected in fall 2006, when the costs incurred by PBC and the local farmer will be reimbursed by HNPD. Travel to organise and check the progress of this action was 115 € (specific) and 715 € (partially, but most of this amount was spent on visiting/checking the Fekete-rét grazing activities).

*Sub-action D.2/2: Fire management to increase habitat diversity in marshes*

No.	Activity	Output	Status with date of start/completion	Responsible person
1.	Two meetings with stakeholders on fire management	Reed-cutters near Csattag and Fekete-rét marshes agree to plans	Completed 30/04/2005	PC, PM
2.	Application for environment permit for fire management	Permits for fire management obtained	Completed 30/07/2005	PC
3.	On-site negotiation with reed-cutters and firefighters on technical implementation	Technical implementation of fire management agreed and signed	Completed 25/08/2005	PC, PM
4.	Cutting reed around plots to be burned	8 plots of 2 sizes (1 ha, 0.25 ha) cut in two sites	Completed 03/09/2005	PC, subcontractor
5.	Attempts at setting controlled fire	Failure due to high water levels and humidity of vegetation	Completed 10/09/2005	PC, PM, subcontractors
6.	Two meetings with stakeholders on fire management	Reed-cutters agree on repeating attempt	Completed 30/07/2006	PC, PM



7.	Application for environment permit for fire management	Permits for fire management obtained	Completed 31/08/2006	PC
8.	Cutting reed around plots to be burned	8 plots of 2 sizes (1 ha, 0.25 ha) cut in two sites	In progress, expected 10/10/06	PC, subcontractors

In sub-action D.2/2 (fire management of reedbeds), HNPD has agreed with stakeholders (two companies in the reed-cutting business and firefighters from Tiszafüred) on the method, location and protective measures of burning planned for September, 2005. Official permits for the fire management from the Jász-Nagykun-Szolnok and Hajdú-Bihar County Inspectorates for Environment and Water were obtained. To set up plots for the burning treatment and to control the spread of fire in the marsh, reed was cut in a 50-m-wide stripe around 6 plots of two different sizes (4 ha and 1 ha) per site or a total of 12 plots in two sites in Fekete-rét marsh (**Map 8.**). One big plot was selected and cut around in Csattag marsh. When all preparations had been made, we attempted to set fire by matches, by paper and by putting burning old stacks of reeds in the homogenous reedstands. However, the green, fully blooming reed could not be set on fire. This was probably due to the high water levels in the marshes and high water content of the vegetation. For example, each plot was in water at least in 15 cm deep. Reed not in water was available only in much smaller areas.

In 2006, we have repeated all the above steps necessary to carry out the fire management. Although 2006 was an even wetter year in the Hortobágy region than was 2005, HNPD attempts to carry out the fire management in 2006 by different methods and ca. a month later in the season, when the water content of the plants would be lower. If this attempt is also unsuccessful, HNPD will try burning the reed in early spring, when this is generally feasible. If 2007 proves to be a dry year, HNPD will attempt fire management in September of that year as planned in the revised application. The indicator to test performance in this action could be the area of reedbeds burned (currently, negligible). The technical problems found are caused by external forces (natural factors, i.e., wet years) and are not likely to lead to financial problems as fire management is a relatively small action in the project. Furthermore, it appears that grazing (D.2/1) is highly efficient in reaching the original goal of opening up homogeneous marshes.

This action has involved some slight costs. For example, the plots to be burned have been cut around by Seiga machinery in both years of attempted burning (500 € EA for 2005). The organisation also included some travel (115 € specific, 218 € partial) to negotiations and on-site discussions with reed-cutters and firefighters.

### D.3: Management of wooded areas

No.	Activity	Output	Status with date of start/completion	Responsible person
1.	Mechanical weed control by mowing	22 ha afforested area mowed and cleared	Completed 30/06/2006	PC, I. Mihalik
2.	Germinating and raising seedlings from acorns	Part of ca. 30 000 seedlings available for potential replacement	In progress, expected until 10/12/2006	PC, I. Mihalik, subcontractor

The Expected results in this action were that “The maintenance of the planned 70 ha wooded area will result in a better condition of these areas and a higher success in the retention of agricultural chemicals. Furthermore, a short-term effect of wooded areas is that more hiding places will be available for small mammals and a longer-term effect will be that they will provide roosting and



nesting sites for several Annex I bird species. Hopefully, in a longer time period, semi-natural forests will develop in the wooded areas.”

This action aims to increase the chances of successful afforestation. Because afforestation (C.2) was started earlier, this action has also been started a year earlier than foreseen. The official FIMP (A.3) contains detailed guidelines and recommendations on the management of wooded areas. Due to a quick and dense overgrowth of weeds, it became necessary to control weeds on the 22 ha areas afforested in 2005. A mechanical clearing of weeds has been carried out in the two plots in June, 2006. The other activity in this action was to germinate acorns and raise seedlings in a greenhouse to produce seedlings for potential replacement in areas where natural germination was low. This action has been progressed as planned. In the future, however, this action may become more important because the low germination success in C.2 may put a higher emphasis on replacement and follow-up activities.

The costs in this action included the year-round storage and raising of seedlings germinated from the acorns remaining after the afforestation in fall 2005 (1812 €). The mowing of the areas also involved costs (221 €). The organisation and checking of this action also involved travel (455 €, all with other actions involved as well).

#### **D.4: Extensive cultivation of arable lands to produce food for small mammals**

<b>No.</b>	<b>Activity</b>	<b>Output</b>	<b>Status with date of start/completion</b>	<b>Responsible person</b>
1.	Four meetings with stakeholders (PBC, NAC, two private farmers)	Negotiations with stakeholders on wildlife lands	31/03/2005	PC, I. Csirmaz, S. Szabó
2.	Agreements reached	Contracts signed with stakeholders	Completed 31/05/2005	PC
3.	Soil preparation and seeding winter crops	Start of wildlife lands cultivation on 33 ha	Completed 31/08/2005	PC
4.	Two meetings with PBC on technical issues of cultivation	Spatial arrangement and technology of wildlife lands agreed	Completed 31/08/2005	PC, PM, I. Sándor
5.	Soil preparation and seeding winter/spring crops.	117 ha land available for feeding, hiding or wintering of target animals	Completed 31/10/2006	PC, PM, PBC

In this action, we expected that “populations of target birds of prey will increase in the short-term and that tree-nesting waterbirds will use the area for roosting and nesting on the longer term. Increasing populations of small mammals will also attract overwintering raptors, such as Long-legged Buzzards (*Buteo rufinus*), Rough-legged Buzzards (*Buteo lagopus*), Imperial and White-tailed Eagles, Hen Harriers (*Circus cyaneus*), Montagu’s Harrier (*Circus pygargus*) to the area. Imperial Eagles are especially targeted by this action, because this species has started to breed in overwintering areas in other parts of Hungary.”

Extensive cultivation for wildlife was started in two major steps in summer/fall of 2005. First, the cultivation of a total of 33 ha started on three groups of lands in the W part of the project area (**Map 9.A**). The cultures grown included maize (3.7 ha), alfalfa (11.3 ha), common sorghum (4 ha) and winter wheat (8 ha). On 6 ha, increased water levels inhibited the cultivation of alfalfa throughout the spring and summer, however, the land was an important feeding place for numerous ducks and



geese. The bulk of the action began in September-October 2005, when the cultivation of 117 ha lands by PBC was started. The three plots were divided into stripes and a crop structure with highest potential benefit to small mammals and game was seeded (**Map 9.B**). 100-m-wide stripes were used because experience from 2004-2005 on 15 ha near the Góré's farmhouse suggested that narrow stripes (20-25 m wide) are not efficient in maintaining stable levels of quail, partridges and rabbits. Approximately half of the crops were left standing throughout the winter, including all of the sorghum (3 stripes), more than half of the maize (4 of 7 stripes), half of the millet (1 stripe), which provided feeding and hiding places for large numbers of the target species. The high number of target species was indicated by an exceptionally high density of raptors throughout the winter and spring.

This action has progressed according to plans. The indicator for performance is the total surface area under extensive cultivation for wildlife (150 ha). This area is below that foreseen in the revised application (188 ha), but is better structured for the target species (raptors), is composed of arable lands of higher quality and better conforms to the needs of the grey partridge reintroduction programme (not part of this project). There is no other problem in the implementation of this action. On 117 ha, the cultivation is progressing according to the strict regulations of bio-qualification (e.g. no chemical use), which further enhances benefits to target prey and predator populations.

The costs involved in this action are reimbursements for the various stages of agricultural cultivation. In the main block (117 ha), soil preparation involved 5290 € (spring 2005 and 2006, fall 2005), whereas other works (seeding, mowing/maintenance) amounted to 17 663 € EA. Cultivation by a private farmer was reimbursed by 179 € EA (with leaving half of the crop standing on 4 ha).

#### 6.5. "E" PUBLIC AWARENESS AND DISSEMINATION OF INFORMATION

##### **E.1: Raising public awareness to the Egyek-Pusztakócs grasslands and grassland conservation**

<b>No.</b>	<b>Activity</b>	<b>Output</b>	<b>Status with date of start/completion</b>	<b>Responsible person</b>
1.	Letting local people know about the project	Local village forum on the project in Egyek	Completed 24/02/2005	PC, PM
2.	Presenting project in international workshop	Talk at N2K site mgmt. & restoration workshop in Gömörszőlös	Completed 16/03/2005	PC
3.	International networking, Satchinez LIFE-project	Hosting visit by team from Romania	Completed 19/03/2005	PC, PM
4.	Disseminating project information on the Web	Project website online in English, Hungarian	Completed 31/03/2005	PM, PC
5.	Presenting project in national conference	Talk at NGO conf. on habitat mgmt., Túrkeve	Completed 16/04/2005	PM
6.	Putting project info at entry points to project area	4 information boards prepared and installed	Completed 31/05/2005	PC
7.	Volunteer involvement in grassland restoration	Six volunteers help in mixing, transport and sowing of seeds	Ongoing, started 30/09/2005	PC
8.	Letting local people know about the project	Meeting with farmers from Nagyiván village (20 participants)	Completed 19/10/2005	PC, PM, I. Sándor (Director)



9.	Circulation of project info	3000 brochures printed in Hungarian	Completed 31/10/2005	PC, PM
10.	Presenting project in national sci. conference	Invited talk at 3 <sup>rd</sup> Hung. Cons. Biol. Conf., Eger	Completed 05/11/2005	PM, I. Sándor
11.	Networking with farmers: sharing experience on grazing; joint planning	Five meetings with farmers, plan is to make them regular	Completed 31/07/06	PC
12.	Presenting results of A.2 in scientific talk at international conference	Symposium talk at 1 <sup>st</sup> European Congress of Conservation Biology	Completed 24/08/2006	
13.	Showing local people the project activities	First "open day"	In progress, exp. for 21 and 28/10/06	PC, PM
14.	Presenting project in national conference	Invited talk at NGO conf. on plant conservation, Túrkeve	To be held 23 to 25 November, 2006	PM
15.	Organising of scientific workshop on grasslands and Natura 2000	Workshop with 50-60 participants and invited talks	In progress, to be held from 29 to 31 March, 2007	PM

The Expected results in this action involved the following. "There will be one website, two brochures, three information boards, and two workshops dedicated to the theme of the current project, the summary of which will be available in the form of a layman's report. The project will also benefit from voluntary work by interested people or organisations. Local stakeholders will have a greater affinity to nature conservation, habitat rehabilitation and the possibilities for nature conservation that open up with the accession of Hungary to the EU. For example, the involvement of local stakeholders into the first LIFE-Nature project of Hortobágy National Park (LIFE02NAT/H/8638) via various forms of communication and by sub-contracts has led to a very positive change in the attitude of local farmers to the National Park. We also expect a higher level of satisfaction by visitors to the area and the National Park."

Many of the activities (sub-actions) foreseen in the revised application to reach the above results have been started or are partially completed. The project website has been up and running on time. Four information boards (instead of three) have been installed at three entry points and at a small exhibit in the Western Visitor Centre of HNP. The Hungarian version of the project brochure was printed in 3000 copies and has been distributed widely in Hungary (at conferences, workshops, in the Ministry, at HNPD and UD headquarters etc.). There is a delay with the English and German version of the project brochure (expected date: 30/11/2006). In all other respects, the action is progressing as planned. The results from the baseline assessment (A.2) have been summarised in a symposium presentation at a prestigious international scientific conference (1<sup>st</sup> European Congress of Conservation Biology, Eger, over 1000 participants), and a manuscript is currently evaluated for publication in Természetvédelmi Közlemények (Nature Conservation Communications), a Hungarian journal of nature conservation and conservation biology. One important feedback for this action is that the project has been invited to be presented at two meetings, a national scientific conference and a meeting of nature conservation NGOs in Hungary. These events are very helpful to publicise the project as most experts involved in nature conservation in Hungary participate. The local farmer sub-action was started by a village forum in Egyek and a meeting with farmers from Nagyiván in 2005 and has been progressing by contacting local farmers and stakeholders on a one-on-one basis. The involvement of volunteers in the practical work has started in 2005 by the involvement of three people from the village of Hortobágy, and in 2006 by the involvement of two people from Hortobágy village and five university students. These persons spent one or two days working on mixing seeds, helping with seeding (C.1, both years), and assisted in monitoring (F.2,



2006). The scientific workshop on grasslands, grassland restoration and management in the light of Natura 2000 as central themes is now scheduled for 29-31 March, 2007 in the town of Tokaj, as part of the workshop series of the Hungarian Conservation Biology Conference series.

The project has thus far produced the following deliverable dissemination materials (all except those indicated are attached in **Annex 3** to this report).

- Project website, available at [http://life2004.hnp.hu/index\\_eng.html](http://life2004.hnp.hu/index_eng.html) in English and at <http://life2004.hnp.hu> in Hungarian (not attached)
- Project brochure (A4 format) in Hungarian
- Four information boards on the project (picture attached)
- A general poster on habitat reconstruction in the EPMS
- A scientific poster on the results of A.2 species and community inventory
- Three oral presentations at scientific or nature conservation conferences; one example attached in **Annex 3** (also in Photo documentation, **A.4**) as per request by the Commission in their letter of 28/02/2006)
- A manuscript under revision entitled “Conservation biology in practice: nature conservation management and landscape rehabilitation in the Egyek-Pusztakócs LIFE-Nature programme”, to be published in the journal Nature Conservation Communications
- A project logo to be used in dissemination materials (attached on the cover of this report and in Photo documentation)

In the upcoming period (winter 2006/2007) we plan to further extend our activities targeting both the general public (e.g. newspaper articles) and visitors to the area (a handout for a self-guided tour for those parts of the project area that are open to the public). This stage of the project is highly appropriate for such activities, as almost all actions have been started and many have provided presentable results. The indicators to test performance are the number of deliverable products related to non-scientific dissemination (6 items: website, brochure, information board, general poster, journal manuscript, project logo).

The costs in this action mostly included subcontracting the development and preparation of dissemination materials (information boards, website, brochure, LIFE-sticker, 4587 € total). Film development and the preparation of foundation for one information board to be exhibited in the Visitor Centre of HNP cost 771 € (EA). Travel for dissemination activities amounted to 160 € (specific) and 1043 € (partially). The latter type of travel also included several visits with farmers targeted by the local farmer sub-action. CM included protective gear for volunteers as foreseen in the revised application (214 €) beyond miscellaneous smaller costs (38 €). OC included participation fees in conferences where the project was presented (248 €) and room rental and restaurant services were used for meeting stakeholders and for project personnel during project visits (225 €).

## **E.2: Development of guidelines for the restoration and management of pannonic steppes**

<b>No.</b>	<b>Activity</b>	<b>Output</b>	<b>Status with date of start/completion</b>	<b>Responsible person</b>
1.	Networking with the two other Hortobágy grassland projects	Regular meetings, site visits and experience-sharing	In progress, continuous	PM
2.	Collection of professional literature and information from other projects	Numerous articles, relevant books and reports collected	In progress, continuous	PM



By this action, we expect that “there will be high demand for the guidelines from other national parks in Hungary and possibly other countries where grasslands are planned for restoration. We also expect that soon after the end of the project the guidelines will be routinely used in evaluation of applications to the national agri-environmental funding schemes.”

Our project is continuously in contact with the other two Hortobágy grassland LIFE projects, and we regularly inform each other of progress and main results. We are also in close working contact with the Great Bustard, the Red-footed Falcon and GrassHabit LIFE-projects in Hungary. An important interface for communication among grassland projects in Hungary will be the workshop between March 29-31, 2007. Even though the collection of general literature and information materials from the other projects has started, this action is scheduled for 2007 and 2008 and has not explicitly started yet.

#### 6.6. “F” OVERALL PROJECT OPERATION, MANAGEMENT AND MONITORING

##### F.1: Project operation and management

No.	Activity	Output	Status with date of start/completion	Responsible person
1.	PC nominated	Mr. L. Lontay hired as PC	Starting from 01/09/2004	Cs. Aradi (Director)
2.	PM nominated	Dr. Sz. Lengyel contracted as PM	Starting from 01/01/2005	Cs. Aradi (Director)
3.	Official decree on task division in LIFE projects	Decree by director of HNPD	16/06/2005	Cs. Aradi, I. Sándor
4.	Smaller teams organised to implement specific actions	Forming of Project Implementation Team (PIT)	Completed 14/09/2004	PC
5.	Involving directors and other experts in project implementation	First meeting of Project Advisory Board	Completed 14/09/2004	PM
6.	Negotiations between UD and HNPD on form of partnership	Formulation and signing of the Partnership Agreement	Completed 04/05/2005	PM
7.	Actual project implementation	Over 100 internal meetings within PIT, everyday contact between PM and PC	Ongoing	PM, PC

In this action, we expected that “the implementation of all other actions will benefit from this general action. The progress of the project will be demonstrated by three progress reports at the end of year 1, 2 and 3, respectively, 1 interim report and 1 layman’s report.”

This action started at the project start date. It has soon become obvious that the workload associated with project management is greater than foreseen and exceeds what can be expected from a half-time project coordinator. Therefore, the project advisory board and the directors of HNPD have decided to appoint a Dr. S. Lengyel, who had previously worked on the LIFE application, as a half-time equivalent Project Manager beginning from 01/01/2005 via subcontracting part of the project management. This was laid down in an official form through a decree by the Director of HNPD on 16/05/2005, and involved a specific division of tasks (please see in **Annex 2.2**). Following the



project mission on 23 June, 2006, the Commission in their letter of August 21, 2006 have asked for further explanation of the roles of the PM and PC. The decree provides some information on the sharing of the tasks, whereas the table below adds further information on the roles of the PM and PC.

Category in project	Tasks
Project Coordinator	coordination of the project on an everyday basis, organisation of and preparation for meetings and negotiations, preparations for decision-making by the PM, overseeing/checking field actions, taking care of contacts, working with local stakeholders and entrepreneurs, official record-keeping
Project Manager	overall planning and calculations, scheduling, negotiating strategic decisions, preparations for decision-making by the Director, evaluation of progress, checking records, financial record-keeping, writing reports and presentations, contact with Partner

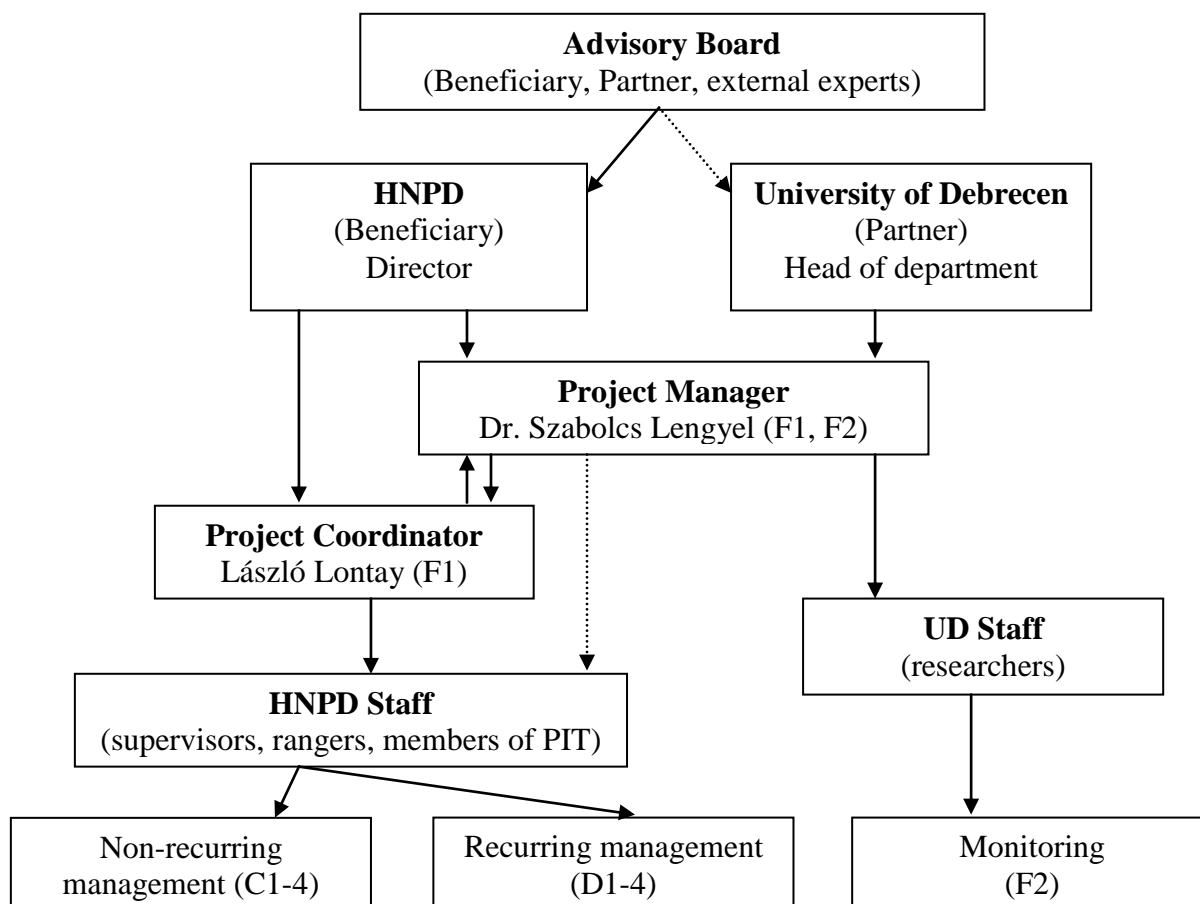
The decree also appointed a land purchase coordinator (Mr. L. Megyery) and laid out detailed responsibilities for tasks both in general project management and land purchase. The Project Implementation Team was officially formed on 14/09/2004 with 11 members, including the Deputy Director of HNPDP, the PM and PC. The Project Advisory Committee was also formed with four members on 14/09/2004, including the Director and the Deputy Director of Finances of the National Park. Various members of the Project Implementation Team have held over 60 formal meetings (with minutes) since the project start date. The Project Advisory Board held seven formal meetings, ca. bimonthly during the first full year and less frequently since then. The following table provides a list of all persons contributing to project implementation between 01/09/2004 and 31/08/2006, their responsibilities and their status (as requested by the Commission in their letter of 21 August, 2006).

	Name	Category	Task, contribution	Status
1	Csaba ARADI	F1,C1,D4	general advice, basic rehabilitation planning	FT (HNPDP)
2	Mária BERECKZI	F1	accounting, invoices	FT (HNPDP)
3	László BESSENYEI	D2,D4	expertise in grazing actions, field logistics	FT (HNPDP)
4	Gabriella BODNÁR	F1	overseeing matching funds, Ministry contact	FT (HNPDP)
5	Mihály BUDAI	C1	seed mixing, storage for grassl. restoration	FT (HNPDP)
6	Imre CSIRMAZ	D4	wildlife lands, small game expertise	FT (HNPDP)
7	Eszter DÉRI	F2	project assistant, design of monitoring system, field assistance, data entry, analysis	FT (UD)
8	Miklós DUDÁS	D4	wildlife lands, birds of prey expertise	FT (HNPDP)
9	Csaba FALUDI	C1,E1	field logistics, field checks (until 30/06/06)	FT (HNPDP)
10	Pál FEKETE	B1,D4	land purchase logistics, grazing logistics	FT (HNPDP)
11	Lajos GÁL	F1,C1,D2	field logistics and checks (from 01/07/06)	FT (HNPDP)
12	Szilvia GÖRI	F1	general advice, record-keeping and reporting	FT (HNPDP)
13	István KAPOCSI	C1	seed harvest and cleaning, grassl. rest. expertise	FT (HNPDP)
14	Szabolcs LENGYEL	F1,F2	Project Manager, biol. monitoring, all actions	Ext. Assist.
15	László LONTAY	F1	Project Coordinator, all actions	PT (HNPDP)
16	László MEGYERY	A1,B1, B2	land purchase preparation and coordination	Ext. Assist.
17	István MIHALIK	C2	afforestation permits, logistics, expertise	FT (HNPDP)
18	Attila MOLNÁR	C1	grassland restoration expertise	FT (HNPDP)
19	Tünde MÜLLERNÉ	D1	preparation of rental contracts	FT (HNPDP)
20	Zsuzsanna PERGÉNYÉ SZ. (Finance Director)	F1	land and durable goods purchase, financial advice, help in reporting	FT (HNPDP)
21	István SÁNDOR (Director)	A1,C1,C2, D4	general advice, expertise in grassland restoration, grazing, wildlife lands	FT (HNPDP)
22	Sándor SZABÓ	B1,B2,D1	land problems, rental contracts	FT (HNPDP)
23	Mária SZÉKELYHÍDI	F1	invoices, bank transfers	FT (HNPDP)
24	Sándor TÓTH	B1,B2	land registry work, Ministry Agriculture contact	FT (HNPDP)



The Partner was solely responsible for action F.2 (Biological monitoring) and all associated activities (please see F.2 for Technical Report from UD). Furthermore, the Partner has been involved in several activities in general project management (planning, negotiations, travel to sites and meetings on implementation of actions other than F.2 etc.). In the reporting period, the PM has been employed full time by a third party (the Hungarian Academy of Sciences, please see **Annex 2.3.4**) and was charged as contact person by UD in the Partnership Agreement (**Annex 2.5**) without a formal employment. All project management activities by the PM are thus compensated in the form of External Assistance in the form of a one-year contract for 2005 and half-year contracts for 2006. Such involvement of a PM beyond the PC foreseen in the revised application has become necessary due to the great variety of tasks and to achieve an efficient division of all tasks (please see tables above and decree by HNPD director in **Annex 2.2**). In the reporting period, the PM was paid by UD as researcher through one subcontract in 2005 under F2 (please see **Annex 2.4.2**).

Office space for project management activities was provided both by UD and by HNPD. UD has further provided equipment (e.g. a laptop computer) for use in the project. The PM will become officially employed as senior lecturer by UD beginning November 1, 2006, after which his services will become reported under Personnel by the Partner. The project organigram is:



Project operation and management involved much more work than foreseen in the revised application. This is due to the variety of activities that required specific expertise in several cases and to the complexity of some actions that required significant background work necessary to implement the actions as planned. Preparation of the request for project modification resulting from unforeseen calamities and involvement of local stakeholders also required much extra work (at least four person.months). The most important indicator to test performance in this action is that no significant delay occurs in any of the actions. Other indicators used to test performance can be the number of requests for price offers, orders for products/services, contracts etc.



The reports that have been delivered since the start of the project and which are also attached to this report in **Annex 5** (except for Progress Report 1) include:

- Progress Report 1
- Report on inventory of plant species and communities
- Technical implementation and management plan for grassland restoration
- Forest implementation and management plan
- Master plan for the long-term rehabilitation of the EPMS

The costs in this action mostly included the project coordination fee for the PM (4920 € EA, 240 €/month in 2005 and 300 €/month in 2006). Consumables mostly included official maps from the land registry and forestry for official procedures and planning purposes (525 € CM). Other CM costs included office supplies and computer accessories (memory, hard drive, pen drives, 367 €) and miscellaneous services (e.g. car wash before and after project visits)

## F.2: Biological monitoring of grasslands, marshes and wooded areas

No.	Activity	Output	Status with date of start/completion	Responsible person
1.	Planning of monitoring system	Monitoring plan developed for each activity	Completed 04/05/2005	PM, E. Déri
2.	Biological monitoring of arable lands	Botanical, zoological study of lands for restoration in 2005	Completed 30/09/2005	PM, E. Déri, researchers
3.	Preparation of map of potential habitats in EPMS	Potential habitat map digitised, commented, completed	Completed 30/11/2005	PM
4.	Assembling information from all sources on habitat rehabilitation in EPMS	EPMS rehabilitation Master Plan (MP) drafted, commented, completed	Completed 30/11/2005	PM, E. Déri
5.	Overview of long-term rehab. plan of EPMS based on new insights	EPMS rehab. Master Plan updated with systematic study results	Completed 31/01/2006	PM
6.	Monitoring of restored lands	Botanical, zoological study of lands restored in 2005	Completed 30/09/2006	PM, E. Déri, researchers
7.	Biological monitoring of arable lands	Botanical, zoological study of lands for restoration in 2006	Completed 30/09/2006	PM, E. Déri, researchers
8.	Monitoring of effects of grazing on grasslands, meadows and marshes	Botanical study of grazed and control quadrats and transects	Completed 31/07/2006	PM, researchers
9.	Habitat status monitoring in project area	Photo documentation of actions, general monitoring results	In progress, completion exp. 31/10/2006	PM, E. Déri, researchers

The Expected results in this action were as follows. “By conducting a properly designed and conducted biological monitoring scheme, detailed information will be available for evaluating the



effectiveness of the different management actions implemented in this project. This way it will be possible to judge the progress of the project and to make modifications in the plans if it becomes necessary (*sensu* adaptive management)."

The F.2 action, which covers all biological monitoring activities in the project is the sole responsibility of the Partner in this project. The following is the Technical Activity Report submitted by UD as Partner to HNPDP as Beneficiary according to the Partnership Agreement. The following part thus describes the activities by the Partner and should clarify the role of the Partner in the project.

## **1. Introduction**

The aim of action F.2 ("Biological monitoring of grasslands, marshes and wooded areas") is to evaluate the progress of habitat management actions carried out in the LIFE-Nature project. Three different monitoring activities were foreseen in the revised application: monitoring of grassland restoration (C.1), monitoring of grazing and burning of marsh edges (D.1 and D.2) and monitoring of wooded areas (C.2 and D.3). Each activity involves three distinct phases: (i) planning, (ii) setting up experimental units and sampling and (iii) data processing, analysis and report-writing.

Planning of the monitoring activities was conducted mainly in 2004 and early in 2005 in several meetings with cooperating researchers and other experts from the University of Debrecen. Based on results from the baseline assessment of plant communities and habitat types (A.2), we first identified the most appropriate design for monitoring, the taxa most appropriate for monitoring and the sampling and analytical methods to be used throughout the four years of the programme. After this, we designated the sites and determined the methods of monitoring. Fieldwork was started in the spring (April) and continued throughout the vegetation period, until late September in both 2005 and 2006. All biological monitoring was organised by personnel at the Department of Evolutionary Zoology and Human Biology of UD as Partner in this project, whereas the monitoring of taxa that required specialists were sub-contracted.

## **2. Monitoring of grassland restoration (action C.1)**

### *2.1. Objectives and methods*

For the monitoring of action C.1 (grassland restoration), the principal aim was to follow the colonisation of the newly restored habitats by the species characteristic to the target habitat types. We established permanent quadrats in spring 2006 on the lands where grassland restoration was carried out in autumn 2005 using short metal stakes and tall wooden stakes. Depending on the size of the lands, two or three macroquadrats (5x5 m) each containing 4 microquadrats (1x1 m) were established on each land parcel restored. A total of 25 macroquadrats were set up, containing 100 microquadrats (original number of quadrats foreseen in revised application was 27). Botanical survey of the quadrats was carried out twice in the summer, during which plant species composition, relative coverage and plant biomass were measured or estimated and soil samples were collected for analysis of the seedbank. Invertebrate surveys were carried out using sweepnetting and pitfall traps adjacent to the quadrats six times during the vegetation period to record as many invertebrate taxa varying in phenology as possible. Survey of birds was conducted twice, once in spring and once in early summer to record most breeding birds and species using the restored lands. Of the taxa named in the revised application, Collembola and worms were not monitored due to their low indicator potential and lack of accessible experts. Carabidae ground beetles, orthopterans, spiders and birds were used. For small mammals (rodents, mustelids), ad hoc



observations have been made, a systematic study of this group will be started after the first full year of wildlife land cultivation (D.4).

## 2.2. Results

Thanks to two rainy periods following seeding, *Festuca* shoots appeared 2-3 weeks after seeding. *Festuca* were the earliest green plants early in spring but by May were overgrown by weeds. In the spring and early summer of Year 1, weedy species dominated, however, *Festuca* clumps began to appear. When weeds were mown in June, a lower green grass storey comprising mainly of *Festuca* was found, in many places in closed patches, in some others mixed with small weeds and the other grass species seeded or present in the seedbank. Weed cover appeared beneficial to *Festuca* growth because it protected young grasses from the sun in summer. The development of *Festuca pseudovina* (seeded in lower-lying alkaline areas) was stronger than that of *F. rupicola* (seeded in higher-lying, dryer loess plateaus), and the growth of both grasses was stronger in areas shaded by weeds or by tree lines. Several ubiquitous invertebrate species typical to agricultural areas (spiders, carabids, grasshoppers) were present in high numbers on the restored lands. Some Carabidae species typical to loess grasslands were present in small numbers in several former alfalfa fields, indicating the presence of potential recolonising species. Many birds used restored grasslands for feeding (many seed-eater passerines). Kestrels (*Falco tinnunculus*) showed heavy use in early spring and after mowing of weeds, and Red-footed Falcons (*Falco vespertinus*) preferred these areas especially after mowing. Lapwings (*Vanellus vanellus*) nested in high numbers on both grasslands neighbouring marshes and on restored grasslands from early spring and many pairs had chicks by the time weeds dominated the restored lands. Quail (*Coturnix coturnix*) has been found in very high densities in restored weedy grasslands regardless of vegetation height. Restored grasslands also provided hiding places for the small number of Grey Partridges (*Perdix perdix*) surviving after the latest release of the reintroduction programme (activity outside the current project). Cranes (*Grus grus*) and especially egrets (Great White Egret *Egretta alba*, Little Egret *Egretta garzetta*) preferred restored grasslands for feeding early in the spring and after weeds were removed by mowing. The heavy use by waterbirds and personal observations suggest that some of the taxa not specifically monitored (e.g. amphibians, e.g. Green Toad *Bufo viridis*, small rodents) were highly abundant on the restored lands.

As for the other indicator species foreseen in the revised application for restored grasslands, Souslik (*Spermophilus citellus*) now appears to be extinct from the entire project area, possibly related to high ground water due to much precipitation in 2005 and 2006. Siberian/Steppe Polecat (*Mustela eversmanni*) was also not seen during the fieldwork and we also have not observed signs of presence of *Gortyna borelii ssp. lunata* in the project area.

## 3. Monitoring of grazing and burning of marsh edges (action D.1 and D.2)

### 3.1. Objectives and methods

The principal aim of monitoring here was to evaluate whether the diversity of species that are typical of more open wetland habitats (i.e. other than reedbeds) increases in the managed areas. To record changes in vegetation by the introduction of grazing, we designated 12 grazed and 12 control quadrats of 4x4 m (four per each of three major habitat types: alkaline grassland, wet meadow and reedy marsh). We also designated two control transects of 4x40 m spanning over from alkaline grasslands through wet meadows into reedy marshes to record changes of habitat boundaries due to grazing and among years. On the designated sites, enclosures were constructed to keep cattle from grazing the enclosed area, which thus serve as controls for the adjacent grazed area. The botanical survey of the control and grazed quadrats was carried out in summer 2006 and will be repeated in



2007 and 2008. As the fire management of the reedbeds was not successful in the extremely wet summer of 2005, we have not started the monitoring of this activity. The detailed zoological monitoring of grazed and control sites will be started in 2007, as foreseen in the revised application.

### 3.2. Results

Grazing by Hungarian Grey Cattle for six weeks early in spring and later by a mixed band of Grey Cattle and Hungarian Mixed breed cattle was highly effective in opening up the reedbeds. Grazed areas, both alkaline grasslands and marshes changed considerably after grazing. Dead plant litter was almost completely removed, and living plant biomass also decreased by grazing. Total plant cover also decreased in grazed sites compared to controls. Because cattle roamed into the marsh in certain places, reed was trampled and disappeared at several such entry points. Thus, much of the marsh edges where grazing was present were opened up as intended in the planning of the action. Reed became considerably thinner in grazed areas than within the enclosures. Open water surfaces, small mudflats and some plants typical to wet meadows appeared in marsh edges where cattle grazed reed. In the wet meadow zone around the marsh, trampling and grazing also caused small-scale heterogeneity and started a process leading to the formation of tussocks. Even though the botanical survey was conducted only six weeks after the start of grazing, evidence of fresh plant growth in grazed areas was found and several plant species not recorded as flowering in control quadrats did so in grazed areas. Cattle-grazing in grasslands led to the appearance and spread of thorny *Cirsium* species by mid-June. However, a mechanical control (mowing by hand by shepherds) of these weeds just before their flowering time has proved efficient in reducing the density of these species.

Grazing of the marshes, together with high water levels in the spring and most of summer, created what ornithologists in E Hungary called the best birding spot in the Hortobágy region in summer and autumn of 2006. The summer of 2006 was highlighted by the simultaneous and sympatric breeding of three species of marsh terns, which rarely occurs anywhere within their ranges. In particular, Fekete-rét marsh hosted ca. 200-300 pairs of White-winged Black Tern (*Chlidonias leucopterus*, rarest of the three species), 400-600 pairs of Whiskered Tern (*C. hybrida*, mostly of S European distribution) and ca. 100-200 pairs of Black Tern (*C. niger*, commonest). Terns were often seen to hunt for small fish in openings of marshes and wet meadows created by cattle grazing. The grazed marshes and grasslands provided superb feeding sites for many herons (Grey Herons *Ardea cinerea*, Purple Herons *Ardea purpurea*, Squacco Herons *Ardeola ralloides*, Night Herons *Nycticorax nycticorax*, Bittern *Botaurus stellaris*), egrets (Great White Egret, Little Egret) and ducks, and were the sites where rarities such as the Cattle Egret (*Bubulcus ibis*), Pygmy Cormorants (*Phalacrocorax pygmaeus*) or Glossy Ibis (*Plegadis falcinellus*) were observed.

## 4. Monitoring of wooded areas (actions C.2 and D.3)

### 4.1. Objectives and methods

Because afforestation was foreseen for the autumn of 2006, as of September, 2006, no specific monitoring of wooded areas has been started yet. However, as part of the baseline assessment of species and communities (A.2), we also included a preliminary botanical survey of existing wooded areas in 2004. The botanical study was conducted in two larger patches of wooded areas by surveying a total of six 20x20 m quadrats.



## 4.2. Results

Some parts of the already existing wooded areas can be considered slightly degraded remnants of riparian gallery forests dominated by *Quercus robur*, *Populus alba*, *Ulmus minor* and *U. laevis*, *Acer pseudoplatanus* and *Pyrus apiaster*. However, most of the wooded areas are highly degraded, consisting mostly of *Robinia pseudo-acacia* and *Fraxinus pennsylvanica*, often with invasive species (*Amorpha fruticosa*, *Ailanthus altissima*). These results show that appropriate control forests will need to be identified close to but outside the project area.

The afforestation carried out in autumn of 2005 appeared as a failure in early spring as no germination was observed and the plots were soon overgrown by weeds. After the control of weeds (late June), however, we found that approximately on average 10% of the acorns had germinated. This low germination success varied greatly from none (in dry, highly alkaline patches) up to 20% (in well-watered, somewhat higher, less alkaline patches especially in the shade or tree lines). Thus, it appears likely that suboptimal soil conditions may delay the germination of acorns and/or that weed cover may be beneficial to germination by providing shade. In any case, germination success is very low and warrants the replacement/management activities planned in D.3. As foreseen in the revised application, a regular biological monitoring will start in Year 3 from the planting to follow the colonisation by plant and animal species into the wooded areas under formation.

## 5. Activities related to monitoring and unforeseen in revised application

As an extra activity not foreseen in the revised application, UD and HNPD have developed the Master Plan (MP) for the long-term rehabilitation programme of the EPMS. The MP uses existing information sources on the area and provides both a map of potential habitats in the general Egyek-Pusztakócs area (10 682 ha), including the project area (4992 ha), and guidelines for designing various kinds of restoration and rehabilitation measures. The Master Plan (MP) is attached in **Annex 5.4** to the Interim Report.

The main conclusion and recommendation of the MP is that any type of restoration/rehabilitation/reconstruction which increases the “naturalness” of the area should be favourable to the conservation status of the entire EPMS. The naturalness of the area is envisioned in two ways, one is the extent of compatibility between current habitat diversity and habitat diversity suggested by the potential habitat map, and the other is the operation of natural (or semi-natural), multi-scale disturbance processes, resulting in a dynamically changing landscape pattern that prehistorically characterised the area. The MP or its source documents have often been used in the design and planning of actions.

Also beyond the specific monitoring actions foreseen in the revised application, general habitat monitoring was performed by monitoring personnel through the preparation of photo documentation. Some of the photographs taken by monitoring personnel are provided in the Photo documentation part (**Annex 4**). Planning is underway for the systematic monitoring of the results of other field actions (e.g. wildlife lands D.4), which was not foreseen in the revised application. Such extra monitoring activities will not cause a deviation from the original budget, as simply more work will be done by the Partner for the same budget.

## 6. Comparison with plans; expenditure and indicators

This action has been progressing as planned. Each type of monitoring activity has so far been started on time and early enough to collect data on habitats and species before the actual habitat



restoration and management activities started. These “before”-type data will be especially important for relating the changes occurring after habitat restoration and management actions.

Following the project mission on 23 June, 2006, the Commission in their letter of August 21, 2006 have asked for clarification of the role of the partner in the project. Specifically, the Commission have asked the following questions:

1. “What is actually the role of the project partner?”
2. “As action A2 was in fact implemented by the beneficiary, only actions F1 (partly) and F2 would remain under the responsibility of the partner, according to the project proposal.”
3. “Within action F2, only 640 working hours (= 80 working days) are allocated as direct personnel, while all other F2 activities would be subcontracted. On the other side, the partner claims significant amounts for travel, consumables, overheads and durable goods (including a 4WD car). The role of the partner itself in action F2 should be clarified.”

The following part provides answers to the above questions and also gives an overview of the expenses incurred in action F2.

1. The role of the project partner is given in the revised application as “All biological monitoring will be conducted by the Department of Evolutionary Zoology and Human Biology of the University of Debrecen as a Partner in this project.” This is still valid, as all monitoring activities are done by the Partner. The removal of A2 from the Partner (subject to project modification) does not substantially change this statement, considering that the activity under A2 was not typical monitoring, rather a baseline assessment. The description of the activities and results from F2 may help in further specifying the role of the partner in the project. Finally, on the day of the project visit there was just simply no time available to go through action F2 in detail. A longer visit may have given the project management more opportunity to describe and show the monitoring system implemented and its first results in action F2.

2. Yes. It also has to be considered, though, that A2 was a relatively small part of the total project activity (e.g. only 1.2% of total EA costs foreseen) and budget (0.76% of total budget and 8% of Partner’s budget). Therefore, the total technical and financial involvement of the Partner in the project does not change substantially after removing A2 from the responsibility of the Partner.

3. Personnel costs were foreseen in the revised application to be relatively low for the Partner as most of the monitoring activity consists of field and laboratory work by specialists in the form of subcontracts. Activities by personnel in this action involve planning and organising field activities and assembling data and writing reports, and 80 working days (ca. one person-month per year) were foreseen as enough for such activities. Personnel costs incurred in the reporting period are for the work by Ms. Eszter Déri, project assistant (‘Graduate staff’ under F.2 in revised application), whose work involved the designing the monitoring system (including e.g. assembling relevant literature, organising, preparing and documenting meetings) and assistance provided to researchers in the field and in the laboratory (e.g. designating and setting up quadrats and transects, collecting samples in the field, sorting samples in lab etc.). Ms. E. Déri also participated in presenting the project on several occasions (e.g. at the project visit by the Commission on 23/06/2006).

Travels to the project area to conduct monitoring by some researchers are included in the invoices they issue, whereas most researchers (e.g. botanists, specialists of vegetation-dwelling arthropods, ornithologists) are carried by the project car (4WD) in the field (e.g. to install quadrats, collect phytomass samples, carry equipment, reach counting points etc.). Beyond the strict sampling days, general habitat monitoring is conducted during additional visits to the project area. Travel by the partner, however, also includes trips related to general project management (F1), for which the PM uses the car purchased in the project. In fact, many trips to the project area have more than one



purpose, i.e., activities related to field actions beyond some given aspect of monitoring. Therefore, part of the trips to the project area would be difficult to separate by action. The project car also is used for internal project meetings, negotiations with stakeholders or entrepreneurs (given as 'external negotiation' in financial report) and networking with other LIFE-projects, national park directorates or universities. The head of the participating Department of UD has authorised the PM to use the project car for the implementation of this LIFE project (please see **Annex 2.6**).

External assistance costs used until October 2006 involve the costs of zoological surveys in 2005. No botanical survey was conducted in 2005, when monitoring involved only agricultural fields (alfalfa, sunflower, maize) as the starting points for restoration. The expenses will be greater for 2006, when the first full round of zoological monitoring of restored grasslands and agricultural fields designated for restoration in autumn 2006 was conducted parallel with botanical monitoring of restored grasslands and of grazed habitats (grasslands and marsh edges). The costs of monitoring in 2006 have not been incurred as of October 2006 because payments are made only after researchers submit the data collected to UD.

Most of the Durable goods foreseen in the revised application have been purchased in 2005 as these were used by researchers in the field surveys. The total cost of the 4WD car was much lower than foreseen (22 240 € instead of 26 000 €), whereas that for the telescope was slightly higher (2528 € instead of 1960 €). As for the digital camera, the partner chose to purchase a fairly basic camera (160 €) easy to use in the field for documentation purposes instead of a professional camera (price foreseen: 2000 €) because a more professional camera was available for use from other sources. Consumable costs include the materials necessary for monitoring activities (e.g. metal stakes, miscellaneous field equipment and computer accessories etc.).

In summary, the expenses paid were mostly as planned and foreseen in the revised application. Indicators for the activities include the number of reports and publications on the results of monitoring (1 manuscript, 2 reports, 2 posters, 3 oral presentations).

### **F.3: External audit of the project**

In this action, we expected that "the accounting and financial management of the project will be exact, thorough, controlled and will adhere to the rules and regulations concerning such projects." This action is scheduled at the final stage of the project and has not started yet. The auditor company charged with the external audit will be a company familiar with LIFE-Nature regulations (e.g. Big Audit Llc., which has prepared the audit for the Final Report of the project LIFE02NAT/H/8638 in which HNPD was Beneficiary).



## 6.7. STATUS OF PROJECT DELIVERABLES AND MILESTONES

<b>Deliverable (D) / Milestone (M)</b>	<b>Action</b>	<b>Deadline</b>	<b>Status</b>	<b>Description / Evidence</b>	<b>Reference</b>
<i>(as in revised application)</i>					
(M) Nomination of PC and assistant [PM and PC]	F.1	15/09/2004	Completed 01/09/2005	Job description and contracts	IR Annex 2.2
(D) Report on inventory of plant species and communities	A.2	31/03/2005	Completed 31/03/2005	Report in Hung. with English summary	Add. Info to PR 1
(D) Project web site available	E.1	31/03/2005	Completed 31/03/2005	<a href="http://Life2004.hnp.hu">http://Life2004.hnp.hu</a>	PR 1
(D) Information boards installed	E.1	31/05/2005	Completed 31/05/2005	Info boards at 3 entry points, 1 exhibit	PR 1, IR Annex 3.3
(D) Management plan for restored grasslands [TIMPGR]	A.3	30/06/2005	Completed 30/06/2005	Plan in Hung. with English summary	Add. Info to PR 1; Annex 5.2
(D) Management plan for newly created wooded areas [FIMP]	A.3	30/06/2005	Completed 31/07/2006	Plan in Hung. with English summary	IR Annex 5.3
(M) First round of grass restoration	C.1	30/09/2005	Completed 05/10/2005	Minutes, orders, contracts, invoices	IR Map 5., Photo documentation
(M) First round of fire management	D.2	30/09/2005	Ongoing/ delayed	Minutes, orders, contracts, invoices	IR Map 8., Photo documentation
(D) Information brochure	E.1	31/10/2005	Completed 31/10/2005	Brochure in Hungarian	Annex 3.2, Photo documentation
(M) First year of cultivating wildlife lands ending	D.4	30/11/2005	31/01/2006	Minutes, orders, contracts, invoices	IR Map 9., Photo documentation
(M) First year of grassland monitoring completed	F.2	30/11/2005	Completed 30/09/2005	Plans, data, photo documentation	Action F.2, Photo documentation
(M) Monitoring of first round of fire management completed	F.2	30/11/2005	Delayed	Plans	–
(M) Goose farm lands purchased	B.2	31/03/2006	Completed 31/08/2005	Purchase contracts, land registry records	IR Map 4.
(M) Construction of cattle-fold completed	C.4	31/03/2006	Completed 25/04/2006	Orders, contracts, invoices for fold etc.	Photo documentation
(M) 50 grey cattle purchased	C.3	30/06/2006	Ongoing/ delayed	Cattle purchase contract signed	Photo documentation
(M) Second round of grass restoration completed	C.1	30/09/2006	Completed 06/10/2006	Minutes, orders, contracts, invoices	IR Map 5., Photo documentation
(M) First year of introducing grazing to ungrazed areas ending	D.1	30/09/2006	Completed 30/09/2006	Minutes, orders, contracts, invoices	IR Map 7., Photo documentation
(M) Second round of fire management completed	D.2	30/09/2006	Ongoing/ delayed	Minutes, orders, contracts, invoices	IR Map 8., Photo documentation
(M) Creation of wooded areas completed	C.2	30/11/2006	Ongoing		
(M) Monitoring of second round of fire management completed	F.2	30/11/2006	Delayed		
(D) Information booklet	E.1	31/01/2007	Pending		
(M) Information booklet printed	E.1	31/01/2007	Pending		
(D) Report on workshops	E.1	31/01/2007	Pending		
(M) Third round of grassl. rest.	C.1	30/09/2007	Pending		
(M) First year of wooded area management ending	D.3	30/11/2007	Pending		
(M) Lands purchased	B.1	31/12/2007	Ongoing		



## 7. EVALUATION AND CONCLUSIONS

### 7.1. THE PROCESS OF PROJECT IMPLEMENTATION

Soon after the project start date, the PC and the PM have designed a timeline (Gantt-chart) which clearly shows the main activities per action and the deadlines/milestones during the entire project. Because the PC deals with the project on an everyday basis, usually he draws attention to the upcoming tasks to the PM and other members of the Project Implementation Team (PIT). In the next step, the PM and PC jointly design the actual activities, their scheduling and checking points. The PM then takes care of planning the details (e.g. calculations), and initiates and prepares for meetings with PIT or Advisory Board (AB) members. The PC takes care of establishing the contacts, gathering price offers, oversees tendering and field activities by working with the respective member(s) of the PIT or AB.

### 7.2. PROJECT MANAGEMENT, PROBLEMS ENCOUNTERED, THE PARTNERSHIPS AND THEIR ADDED VALUE

Many different activities have been going on in the project and project management requires much more work than foreseen in the revised application. Project management is done mainly by the PM, whereas everyday project operation/coordination by the PC. Both the PM and PC are considered as half-time, which means they also have other duties beyond this project. In busy times, when activities have to progress in several actions, the actual workload is much higher than half-time, which have caused some problems relating to time management. Other problems are with some members of the PIT, because these members do not show the activity foreseen at the time of completion of the revised application. In such cases, the AB has been helpful in advancing the specific task.

New partnerships have been established both inside and outside the project. New partnerships formed between the Beneficiary and Partner, e.g. between HNPD employees and UD researchers, and now some of these contacts are not limited to this project. The most valuable partnerships, however, are those with local farmers/farming companies. Such new partnerships were sparked by the sincere intent of the project to involve local stakeholders in project implementation and decision-making. This initiative has considerably changed the attitude of farmers and other stakeholders toward nature conservation. Instead of conflicts that had been typical in such relationships, the project now offers an example how local stakeholders can be involved in habitat management (*sensu* “collaborative management”).

### 7.3. SUCCESS AND FAILURES OF THE METHODOLOGY APPLIED, RESULTS OF ACTIONS, COST-EFFICIENCY

Unforeseen external calamities and the involvement of local stakeholders have induced several changes in the plans compared to the revised application. This has in turn caused HNPD to file a request for project modification, increasing the administrative burdens on both project management and the European Commission. Even though such a development would generally indicate failures in project implementation, in the case of this project, most changes will result in increased conservation benefits. For example, all changes in habitat restoration or management indicate that activities will be conducted in a larger area than foreseen in the revised application, whilst costs will not increase. Furthermore, the added value of partnerships with local stakeholders is that cooperation during the project will provide a foundation for the continued operation of the habitat management system after the end of project. Therefore, HNPD believes that the apparent failure (cf. project modification) is in fact a success of the methodology applied. The results of the actions at the current stage are promising as all actions are relatively successful (please see descriptions above).



Cost-efficiency in general is remarkably high in this project. For a less-than-average budget (by LIFE-Nature standards, little over 1 million Euro), the habitat restoration and management actions will benefit a very high number of Natura 2000 species (mostly birds) and a large surface area of Natura 2000 habitats (pannonic loess steppes and pannonic salt steppes and marshes). Furthermore, the results and recommendations from this project (e.g. E.2, F.2) can be directly used in the management and monitoring of Natura 2000 sites, especially freshwater marshes and grasslands. Cost-efficiency of specific actions is relatively high, as shown by minor or no differences between costs budgeted and actually incurred. The only exception from cost-efficiency is land purchase in B.2 (Villongó area), where external circumstances (bidding negotiation due to bankruptcy of landowner) forced HNPD to spend more than the price foreseen on grasslands.

#### 7.4. COMPARISON AGAINST THE PROJECT OBJECTIVES

##### 7.4.1. General objectives

Objective (as in revised application)	Assessment of implementation
Decrease the negative effects of fragmentation on grasslands and the impacts of agriculture on grasslands and rehabilitated marshes	Fragmentation is greatly reduced, the western ecological corridor has been implemented, buffer zones around remaining arable lands in S two-thirds of area have been formed
Eliminate goose farms, that seriously degrade grasslands, and restore grasslands on arable lands	Goose farms have been eliminated, grasslands have been restored on 59% of arable lands planned
Develop grazing capability to balance spatial inequalities in grassland management	The involvement of local farmers greatly increased grazing capability and balanced spatial inequalities; cattle have been purchased by the project for specific grazing management
Increase the diversity of marsh habitats by grazing and fire management	Grazing marsh edges near Fekete-rét marsh successfully increased marsh diversity, fire management thus far unsuccessful due to external factors (two wet years)
Protect and improve the habitats of Annex I waterbirds and birds of prey	Wildlife lands near marshes and near existing forest offer feeding areas for waterbirds and raptors, which have been using these areas in large numbers

##### 7.4.2. Specific objectives

Objective (as in revised application)	Assessment of implementation
Purchasing 116 ha arable land to establish ecological corridors to connect grassland fragments and create buffer zones to reduce infiltration of agricultural chemicals into marshes and grasslands	33 ha land purchased thus far in three areas; one of the two ecological corridors planned has been established; buffer zones around remaining arable land have been formed
Transformation of 85 ha arable land into pannonic loess steppic grasslands (Natura 2000 code 6250) and 583 ha arable land into pannonic salt steppes (code 1530)	Loess steppic grassland restoration was started on 70 ha and salt steppe grassland restoration was started on 333 ha
Purchasing 415 ha grassland degraded by goose-farming and converting them to sheep-farming.	306 ha grasslands have been purchased, sheep-farming has been established on a large part of this land (ca. 240 ha)



(table continued)

Objective (as in revised application)	Assessment of implementation
Creation and management of two wooded areas on 70 ha arable land to restore steppe woodlands, to prevent infiltration of agricultural chemicals into marshes and to provide nesting sites for Annex I birds	Afforestation has been started one year earlier as an experiment on two plots (22 ha); germination success is very low, other measures as well as replacement necessary
Purchasing 50 Hungarian grey cattle to direct grazing to ungrazed native grasslands	50 grey cattle have been purchased by HNPD; grazing was present on ca. 200 ha previously ungrazed grasslands near Fekete-rét marsh and on ca. 220 ha near Csattag marsh
Create semi-natural disturbances in homogeneous reedbeds by grazing and burning (fire management).	Reedbed openings and disturbance have been established by grey cattle roaming into marshes; fire management thus far unsuccessful
Cultivate 188 ha land owned by the National Park in an extensive way to enhance populations of small mammals that Annex I birds of prey consume	Extensive cultivation of 148 ha land implemented; large numbers of raptors indicate success
Biological monitoring of target habitats, development and implementation of management plan for restored grasslands and reconstructed wooded areas	Monitoring of grassland restoration and grazing has been established and is ongoing; monitoring of other actions has been planned and will be started in 2007
Raising public awareness to grassland and marsh conservation and the Natura 2000 network	Website ready, information boards installed, project brochure distributed widely, project presented in conferences, farmers involved

In summary, most of the actions have been started and are being implemented successfully. Two exceptions are afforestation on arable lands (C.2) and fire management of marsh edges (D.2/2), which have been unsuccessful so far. The reasons are external; possibly both can be explained by the high water levels in the project area and in the general area in the first two full years of the project (2005-2006). The project will explore alternative methods to implement these two actions in fall 2006 and/or 2007, if necessary. Land purchase has been progressing slower than foreseen in the revised application, but in a steady pace, which suggests that grassland restoration planned in these areas can be completed in 2008.

#### 7.5. ENVIRONMENTAL BENEFITS, POLICY AND LEGISLATION IMPLICATIONS

Several actions directly benefit the two Natura 2000 priority habitats. Immediate conservation benefits are that the area of arable lands decreases and thus both the direct and indirect impact of arable lands on the target habitats is reduced. Furthermore, if the restoration process is successful, the surface area covered by the two Natura 2000 priority habitat types will increase, while the fragmentation and susceptibility to pollution of these habitats will greatly decrease. Human disturbance related to regular cultivation of arable lands will also decrease.

Goose-farming is now gone from the area, making it possible that a slow rehabilitation of the impacted grasslands (mostly alkaline grasslands especially rich in microforms) will begin. This process is assisted by sheep-grazing, which can contribute e.g. by enabling the transfer of recolonising native plant species to the degraded areas.

The diversity of alkaline marsh habitats (that also belong to priority habitats as part of pannonic salt steppes and marshes, code 1530) has started to increase considerably by grazing.



The project will result significant knowledge on restoration and subsequent management on the two priority habitat types. Especially of interest in this project is the combination of restoration and management type. The project will be able to answer questions on which basic type of management (no management, mowing, grazing in general, grazing by sheep, by cattle) is the most appropriate for restoration success after the grassland restoration is started. Furthermore, the project will provide knowledge on the combined effect of some management types (e.g. mowing in summer and grazing in fall).

Beyond Natura 2000 habitats, numerous Habitat Directive Annex II species are likely to benefit from the project. Mammals that will benefit are *Lutra lutra*, *Spermophilus citellus*, *Mustela eversmanni*; reptiles: *Emys orbicularis*; amphibians: *Bombina bombina*, *Bufo viridis*. Many Bird Directive Annex I species will directly benefit from the habitat restoration and management actions in the project, among them priority species as well.

Benefit by	Bird species benefitting
the higher availability of nesting/feeding opportunities in increased wet meadow zones and/or more open marshes	<i>Ixobrychus minutus</i> , <i>Nycticorax nycticorax</i> , <i>Ardeola ralloides</i> , <i>Botaurus stellaris</i> (priority species), <i>Anser anser</i> , <i>Podiceps cristatus</i> , <i>Tachybaptus ruficollis</i> , <i>Podiceps griseigena</i> , <i>Anas querquedula</i> , <i>Aythya nyroca</i> (priority species), <i>Haliaeetus albicilla</i> , <i>Circus aeruginosus</i> , <i>Porzana porzana</i> , <i>Porzana parva</i> , <i>Rallus aquaticus</i> , <i>Himantopus himantopus</i> , <i>Sterna hirundo</i> , <i>Chlidonias hybridus</i> , <i>Chlidonias niger</i>
increased availability of feeding/nesting sites on grasslands/wet meadows	<i>Egretta garzetta</i> , <i>Egretta alba</i> , <i>Ardea purpurea</i> , <i>Ciconia nigra</i> , <i>Ciconia ciconia</i> , <i>Plegadis falcinellus</i> , <i>Platalea leucorodia</i> , <i>Circus pygargus</i> , <i>Philomachus pugnax</i> , <i>Asio flammeus</i> , <i>Anthus campestris</i> , <i>Lanius minor</i> , <i>Vanellus vanellus</i> , <i>Limosa limosa</i> , <i>Tringa totanus</i> , <i>Gallinago gallinago</i>
increased availability of feeding/nesting sites on wildlife lands	<i>Aquila heliaca</i> (priority species), <i>Falco vespertinus</i> , <i>Falco tinnunculus</i> , <i>Falco cherrug</i> , <i>Grus grus</i> , <i>Coturnix coturnix</i> , <i>Perdix perdix</i> , <i>Emberiza citrinella</i>

The most important policy implication of the project is that it may help strategic thinking in the frame of landscapes. Landscapes are rarely used as bases for policy development. This project draws attention to the importance of considering geographically and biologically intertwined habitats and the specific need to address the role of the diversity of these habitats in maintaining landscape-level biodiversity at the policy level. This project may provide an example for the need for one-on-one consideration of landscapes or landscape types, which cannot be addressed by national or regional policy measures, e.g. agri-environmental schemes. This project shows the need to go down one more level on the geographic scale. A landscape-approach to policy development requires an integrative approach, including e.g. water framework directive and other acts related to natural resources.

#### 7.6. INNOVATION, DEMONSTRATION VALUE

At the current stage, this project is characterised by one significant innovation, large-scale grassland restoration using two seed mixtures to further enhance habitat diversity within the plots. The other actions being implemented (e.g. grazing, afforestation etc.) do not involve substantially innovative methods or processes. However, their combined application in order to enhance the diversity of habitats at the landscape-level to maximise species biodiversity is an innovation of its kind, which is worthy of application in other areas as well. Areas where a potential for such conservation planning exists are those where adequately large areas are available to allocate different habitat restoration and management methods in an effort to maximise general (landscape-level) biological diversity, i.e., not just one or a few species or taxa.



## 7.7. SOCIO-ECONOMIC EFFECTS

The most important socio-economic effect of this project is that a generally positive attitude to nature conservation is forming among local stakeholders. They no longer see nature conservation as an inhibitor of their progress, rather, as a contributor to making their life easier. The concrete example is the cooperation with farmers participating in grazing. Three farmers have made considerable investment in livestock infrastructure and take care of habitat management envisioned in the project. Positive effects on employment are not directly measurable, but are important, e.g. NAC have started their livestock business from scratches (i.e., from having no livestock at all) after learning and participating in the implementation of grassland restoration. Many other farmers are making such an adjustment to their operation, which will definitely lead to the creation of new jobs in the area. Such a return of grazing as the primary activity of farmers may also lead to a revival of pastoral culture. This effect, coupled with the increased diversity of habitats and better conservation status of the area leading to slowly growing eco-tourism business, may result in an increased interest in the area from tourists. Some positive effects on tourism could be observed in 2006 at a small scale, e.g. the few pensions in Kócsújfalu had a better-than-expected year because many birdwatchers from western countries came to see the area and its birds (especially the three terns, the great number of herons, spoonbills, egrets, shorebirds and raptors). Such developments may also lead to the creation of a few jobs in the area.

## 7.8. THE FUTURE: SUSTAINABILITY AND CONTINUATION OF THE PROJECT, REMAINING THREATS

The project was more efficient in creating the possibilities for sustainability than foreseen. This was because local farmers or farming companies have become financially interested in keeping the grazing system as established by the project, because they can apply for agri-environment funding after the livestock they graze on HNP grasslands. There is even some competition expected among farmers when the newly restored grasslands become available for grazing. Such interests in the area now appear to provide a guarantee for the long-term sustainability of grazing as the preferred way of management of Hortobágy grasslands. With a little mediation between reed-cutters and livestock farmers, the management of marsh edges by grazing can also be solved. The larger marshes were regularly used for grazing in the past, indicated by old descriptions and e.g. by three out-of-function wells inside Fekete-rét marsh.

One threat remaining is the infiltration of chemicals into Bőgő marsh from arable lands to the E of the marsh. This effect does not directly threaten the rest of the marsh as it mostly affects the northern part, which is physically separated from the southern part by a dyke. In order to quantify the extent of this threat, HNPD will conduct water chemistry measurements in 2007.

## 7.9. LONG TERM INDICATORS OF THE PROJECT SUCCESS

The ultimate indicator of project success is the landscape-level biodiversity (direct measure) or the naturalness of the area (indirect measure). For the direct measure, it is necessary to demonstrate the link between the biodiversity increase and the increase of habitat diversity due to the project activities. The monitoring activities going on in the project will provide the basic data for the calculation of the direct measure of landscape-level biodiversity. The naturalness of the area can be quantified by relating the habitat diversity patterns resulting from the project to the habitat patterns suggested by the map of potential habitats devised in the Master Plan. An alternative is to compare the disturbance regimes potentially operating in prehistoric times and those actually operating today (frequency, intensity and scope of disturbance factors, e.g. grazing, fire, floods etc.). As these factors are primarily responsible for maintaining habitat diversity and thus, biodiversity, the compatibility between disturbance regimes may characterise the naturalness of the area. Other indicators are the population sizes of species of high indicator value (e.g. predators such as red-footed falcons; highly vulnerable species such as bitterns; or typical species such as souslik etc.



## 8. PLANNED PROJECT PROGRESS

The highest priority in the second half of project implementation is to complete each action as foreseen in the revised application (for habitat restoration and management actions), or in the modified project (for land purchase actions). By the time of the Interim Report, all relevant actions have been started, which means that almost all of the mechanisms necessary for implementation have been established. For example, in the cultivation of wildlife lands, the project management knows which persons to contact, everybody involved knows which field we talk about and we know what it is going to take (in time, paperwork and money) to organise the whole process etc. Many problems and non-substantial changes discovered at the initial stage have been implemented by now. Because all circumstances have been evaluated and all stakeholders have agreed on the plans, further changes are not likely to affect any of the actions.

Besides the activities laid out in the revised application, several activities will be stressed more in the second half of the project. First, there will be a greater emphasis on completing the land purchases that are possible to complete by summer of 2007 so that there is enough time available to solve all unsolved cases (e.g. NLF lands, lands with unavailable owners etc.) until 31/12/2007 at the latest. The surface area goals are close in B2 (grassland purchase) and farther in B1 (arable land purchase). The reduced target for arable land purchase can be met by finances because ca. 66 000 € is available (see Chapter 9), which at current prices buys 66 ha land. The priority land absolutely necessary to create the buffer zones and ecological corridors foreseen in the revised application is smaller than this (total land to be purchased in B1 is 82.5 ha), therefore, there are good chances to complete land purchase and the subsequent restoration as foreseen. Furthermore, one large saving can be expected in grassland restoration, and several smaller ones in other actions, which further increases the options for successful completion. Second, there are two full years to make up for the failed initial attempts at fire management of reedbeds and at afforestation. If burning later in the season is not successful in fall 2006, then an early spring burning will be attempted in 2007. If 2007 happens to be a dry year, the originally planned late summer burning will also be attempted in other parts of the target marshes. Third, in afforestation activities, the planting of seedlings instead of acorns will be tried on plots afforested in 2005 and also on some of the new plots. Finally, this exciting stage of project implementation, i.e., when the first results of the project activities start emerging, offers an excellent opportunity to put a greater emphasis on dissemination activities.



## 9. COMMENTS ON FINANCIAL REPORT

The following tables give an overview of the costs used and their division in the main categories of expenditure, separately for the Beneficiary and Partner as well as for the entire project.

Category of expenditure	Budget foreseen in revised application	Current spending (HNPD)	Current spending (UD)	Total spending	% usage
Personnel	68 222	31 889.51	1 051.04	32 940.55	48.3
Travel	18 895	8 215.48	2 017.21	10 232.68	54.2
External assistance	440 387	116 065.66	4 204.91	120 270.57	27.3
Durable goods	51 460	3 146.00	22 786.96	25 932.96	50.4
- Infrastructure	0	0.00	0.00	0.00	–
- Equipment	51 460	3 146.00	22 786.96	25 932.96	50.4
Land purchase / Lease	253 700	171 637.50	0.00	171 637.50	67.7
Consumables	167 348	111 094.01	625.52	111 719.53	66.8
Other costs	11 975	551.67	20.75	572.42	4.8
Overheads	28 013	14 972.67	1 696.87	16 669.54	59.5
<b>TOTAL</b>	<b>1 040 000</b>	<b>457 572.49</b>	<b>32 403.26</b>	<b>489 975.75</b>	<b>47.1</b>

A total of 489 975.75 € or 47.1% of total costs foreseen has been spent on the project activities thus far. This proportion agrees well with the number of months passed (24 or 46% of 52 months total), and shows that the spending rate is in accordance with the project time passed. The individual budget posts show a slight variation in the rate of usage. For Personnel, Durable goods and Travel, the costs are very close to the rate expected at this time of the project duration. For Land purchase, Consumables and Overheads, the rate of spending is above the average, whereas for External assistance and Other costs, the rate is lower than expected on the proportion of time passed. The contribution of the Commission received (40% of 700 302 € total EU contribution) made up more than half (57.2%) of the total expenses thus far, whereas matching funds by HNPD made up the rest (42.8%). The rate of matching funds for the entire project was foreseen to be 32.7% of the total project expenses, thus these numbers show that HNPD has invested proportionately more matching funds into the project than expected. Furthermore, the EURO/HUF exchange rate was at 247 HUF/EURO at the time of the advance payment, and was 273.49 HUF on October 1, 2006, the rate of which was used (according to SAP) for calculations in the financial report. This corresponds to a difference of 45 878.68 EURO, which has been lost from the project (4.4% of total project costs foreseen). Although at present it appears that this loss does not threaten the implementation of the project, it cannot be guaranteed that further changes in the exchange rate will not affect the project. HNPD is not planning to file a request to consider this loss at the moment, but in any case, HNPD is eagerly waiting for the Commission's anticipated official position on the issue of variable exchange rates.

Personnel costs (48% of that foreseen) add up from a total of 25 people at HNPD plus UD who have worked or are currently working on the project. Although many of these people contributed only a small number of days, a few people spent significant amounts of time on the project. The total number of productive days in a given month was calculated for every employee as the total number of days in that month minus the sum of non-productive days (number of weekend days, public holidays and days of annual leave). The daily rate was determined by total gross salary (including social costs) divided by the number of productive days in a given period. For 2004, salaries and productive days were counted only for the 4 months between 01/09/2004 (project start date) and 12/31/2004, whereas for 2006, the first 8 months (until the reporting date of 31/08/2006)



were considered. The employment of some persons at HNPDP ceased (C. Faludi, L. Megyery) due to budget cuts by the government, whereas that of others started in the reporting period (S. Tóth).

The slightly higher-than-average rate (54%) in Travel is explained by the frequent need to visit the project area to meet stakeholders or subcontractors for negotiations, discussions, field guidance and checking of habitat restoration and management activities, monitoring, contracting etc. Landowners also need to be contacted in person, which adds further costs to Travel. Travel costs are likely to decrease in 2007, when land purchase is completed and the annual scope of some actions (e.g. grazing infrastructure, grassland restoration) will be much smaller and other actions will require less checking (e.g. grazing) than in the first two years.

A considerable part of the Travel costs (ca. 2913 €) have been incurred by the travels necessary to prepare and complete land purchases. These costs were incurred by HNPDP personnel (L. Megyery) in the first 4 months of the project. However, Mr. Megyery was retired as of 01/01/2005, when several jobs were cut at HNPDP by the Ministry. Within HNPDP, Mr. Megyery had been charged with land purchases in the Hortobágy region since the early 1990s, thus, his knowledge, experience and contacts have been deemed essential to the project's success. Therefore, Mr. Megyery was appointed in a decree by the Director of HNPDP (16/05/2005) to work on the project as land purchase coordinator after his retirement through subcontracting land purchase preparations to Rila Bt., of which Mr. Megyery is a representative. The invoices issued by Rila Bt. cover Mr. Megyery's services (working time, land registry work, communication services, negotiations etc.) based on the number of recorded hours worked on land purchase in this project, but do not cover travel costs. Rather, travel costs for land purchases have continued to be reported under Travel rather than under External assistance to keep travel costs lower and more controllable by HNPDP. Although paying travel costs for non-personnel has not been foreseen in the revised application (assuming that Mr. Megyery would be employed throughout the project), the travel costs involved are those that have been foreseen in the revised application in actions A1, B1, B2 and F1. These travel costs have been and continue to be essential to secure the successful purchase of the lands foreseen in the revised application. All travels by Mr. Megyery related to land purchase in this project are recorded and kept on file on the official travel slips of HNPDP.

Funds spent in External assistance are lower (27%) than expected based on the time at project duration. This is only because several large payments are due in 2006 after the submission of this Interim Report. For example, ca. 68 000 € will be paid to subcontractors for work completed in autumn 2006 in C1 grassland restoration, D2 grazing, D4 wildlife lands and F2 monitoring combined, which will raise the proportion of money used to nearly 43% in External assistance.

Spending on Durable goods has progressed as foreseen (50%). The majority of the equipment necessary for the monitoring activities by the Partner has been purchased, whereas some of the Durable goods costs foreseen may be saved on the part of HNPDP (e.g. thus far only one of two electric fences foreseen in C4 and D1 has been necessary and purchased, and at a lower price than that foreseen).

For Land purchase, the higher costs (68%) are explained mostly by the high percentage of lands purchased in the first two years (64% have been purchased). The higher-than-foreseen costs incurred in the purchase of the first and largest chunk of land in Villongó area (175 ha) also added to higher costs, which was essential to achieve one of the most important aims, the elimination of goose-farming from the area. Subsequent land purchases progressed at lower prices, although prices were still somewhat higher than foreseen for grasslands, but, interestingly, not for arable lands. However, prices paid for the lands were not outside the average values estimated in professional valuations at the time of purchase (please see **Annex 2.1**).



The largest part (ca. 110 000 €) of Consumables are made up of the costs of cattle (purchased at the price foreseen in the revised application) and the cost of seeds from commercial sources for grassland restoration. The price of the grass seeds has increased from 8 €/kg in 2003 (time of writing application) to ca. 12 €/kg in 2006. This increase presented an unforeseen extra cost of ca. 16 000 € in 2006. The extra cost will not cause problems as a similar amount of money was saved in 2005, when relatively more seeds could be harvested for seeding in a smaller area.

Other costs are relatively low. This is mainly because the largest part of Other costs was planned in E1, which was foreseen to progress mostly in the winter months, when habitat restoration and management actions do not occur. The costs are likely to increase considerably in winter 2006, when E1 continues and several dissemination-related costs (E1) will be incurred.

Overheads costs are similar to those foreseen and are composed of general office costs (fuel, electricity, heating, water etc.) and extra communication costs. General office costs are charged to the project as the ratio of project expenses and the total expenses by HNPD or the ratio of project person.days and total person.days at the participating Department of the Partner. Besides these general costs, internal project management and contact among members of project implementation teams require significant telephone costs, which are charged monthly to Overheads.

As public sector bodies, HNPD and UD have no (UD) or very limited (HNPD) possibilities to recover Value-Added-Tax incurred on purchases and services. The declarations by the responsible persons (directors and finance directors) of both participants are attached in the Annex to this report (A.2.7). The declarations by the Hungarian tax authority have been requested and will be later attached to the report.



## 10. ANNEXES

### List of documents attached in Annex

#### A.1. MAPS

Map 1. Map of project area with geographical names mentioned in this report.

Map 2. Land purchase targets in action B.1

Map 3. Land purchase progress on E shore of Csattag marsh as of 01/10/2006 (action B.1)

Map 4. Land purchase in the Villongó area (action B.2)

Map 5. Areas where loess and alkaline grassland restoration took place in 2005 and 2006.

Map 6. Areas where afforestation took place in autumn 2005.

Map 7. The grazing system operating in the project area from 2006 (action D.1, sub-action D.2/1).

Map 8. Concrete plans and preparations completed in autumn 2005 and 2006 for burning marsh edges to open up homogeneous reedbeds (sub-action D.2/2).

Map 9.A. Overview of lands with extensive cultivation for wildlife.

Map 9.B. Detail of wildlife lands in the E part of the project area (crop structure 2005/06).

#### A.2. MISCELLANEOUS RELEVANT DOCUMENTS

A.2.1. Land price valuation for land purchases by Héthy & Kulcsár professional valuers

A.2.1.1. Land price valuation for land purchases in Villongó area (summer-fall 2004)

A.2.1.2. Land price valuation for land purchases in the Kis-Jusztus and Bőgő marsh areas (autumn 2005)

A.2.1.3. Land price valuation in Csattag area (autumn 2005)

A.2.2. Decree by Director of HNPD on LIFE projects at HNPD

A.2.3. Documents in F1

A.2.3.1. Job description for Project Coordinator (L. Lontay, Personnel, F1)

A.2.3.2. Timesheets and payslips for Project Coordinator (L. Lontay, Personnel, F1)

A.2.3.3. Contracts for Project Manager (dr. S. Lengyel, 2005, 2006, External assistance, F1)

A.2.3.4. Certificate of full-time employment of Project Manager (dr. S. Lengyel)

A.2.4. Documents in F2

A.2.4.1. Timesheets and payslips for E. Déri (project assistant, Personnel, F2)

A.2.4.2. Contracts for External assistance in F2 (2005)

A.2.5. Partnership Agreement between HNPD (Beneficiary) and UD (Partner)

A.2.6. Memo from Head of the participating Department on car usage

A.2.7. VAT declarations by HNPD (Beneficiary) and by UD (Partner)

*Note: Please see Annex 3 to 5 in separate document*

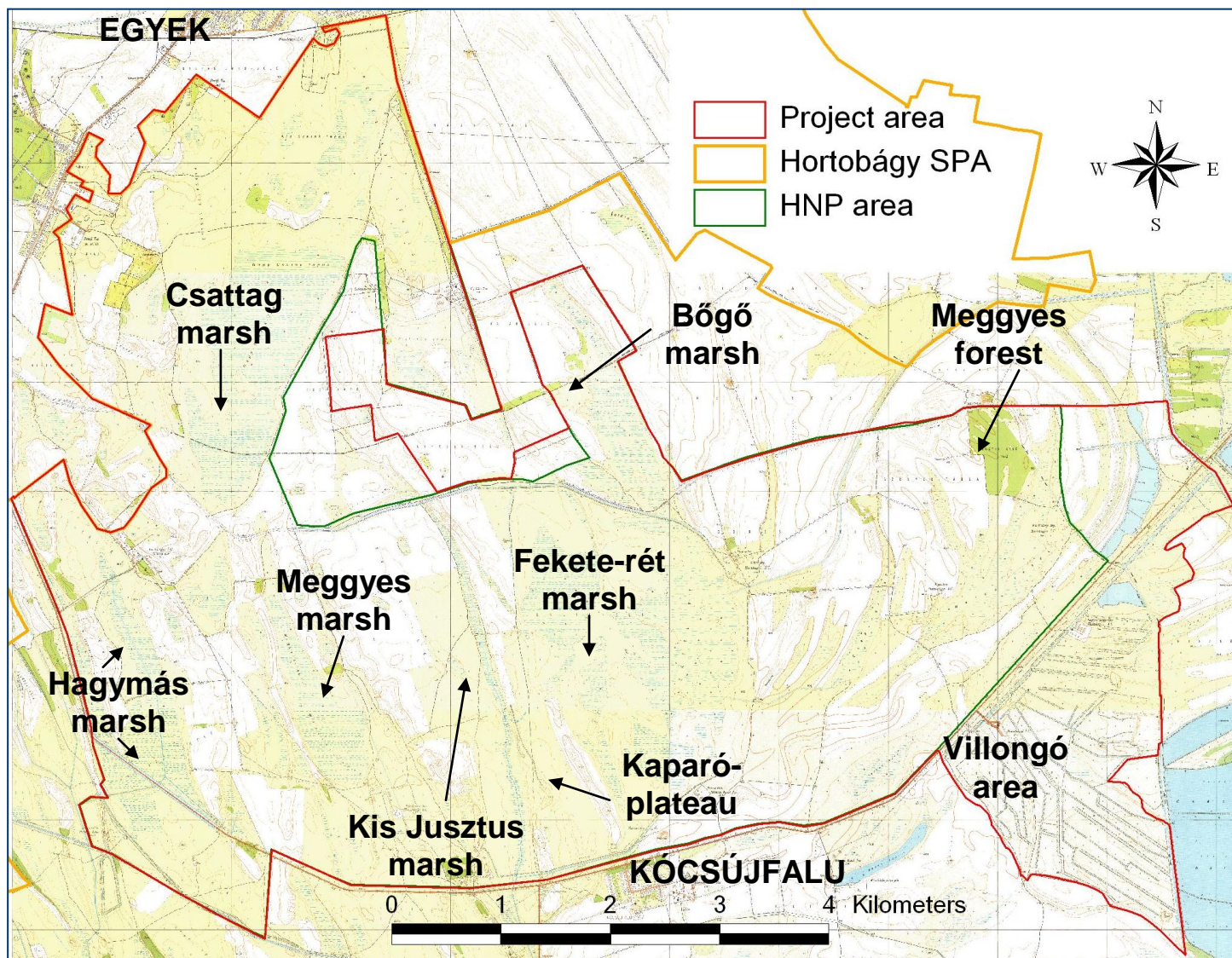
#### A.3. DISSEMINATION PRODUCTS AND EXAMPLES

#### A.4. COLOUR PHOTOGRAPHS ON MAIN PROJECT ACTIONS AND RESULTS

#### A.5. DELIVERABLE PRODUCTS

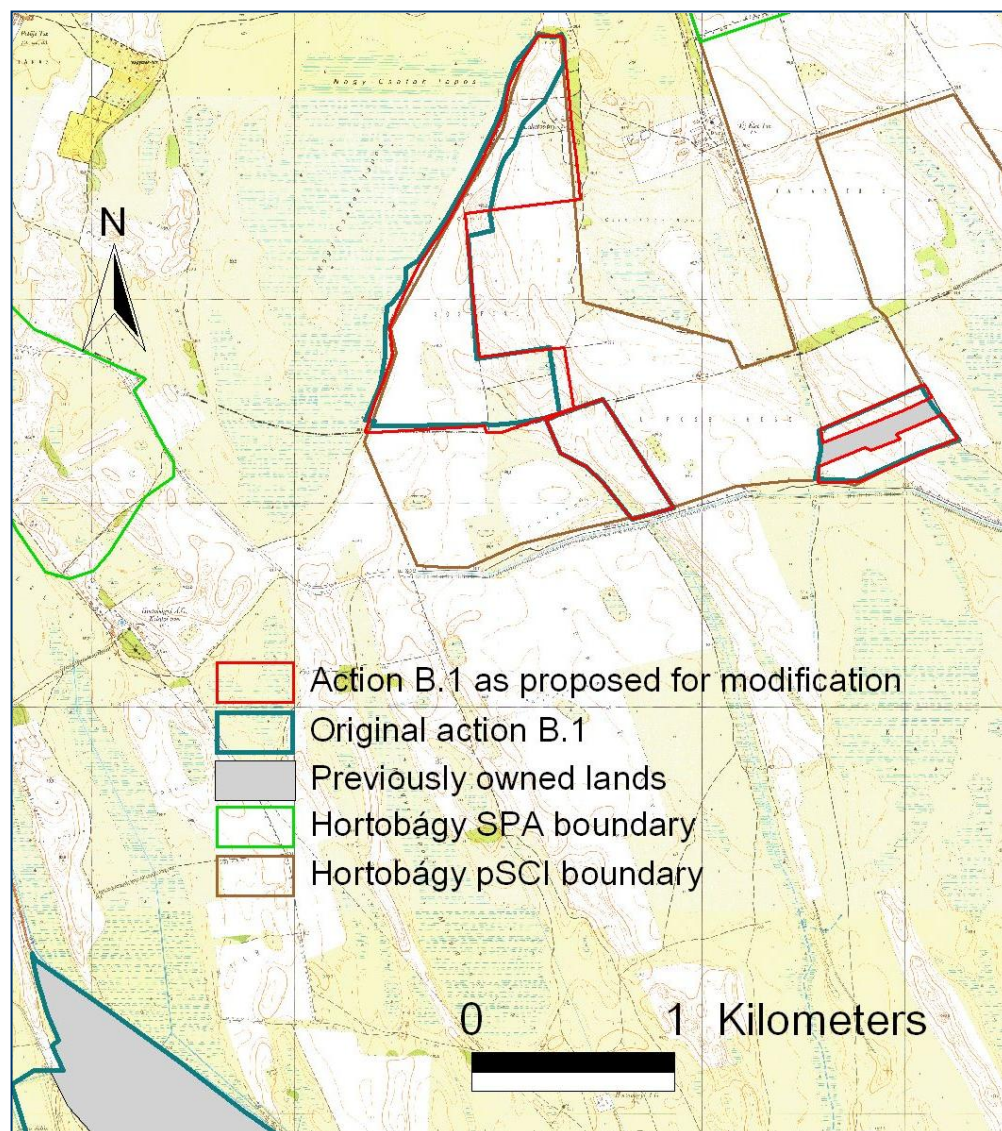


## A.1. MAPS



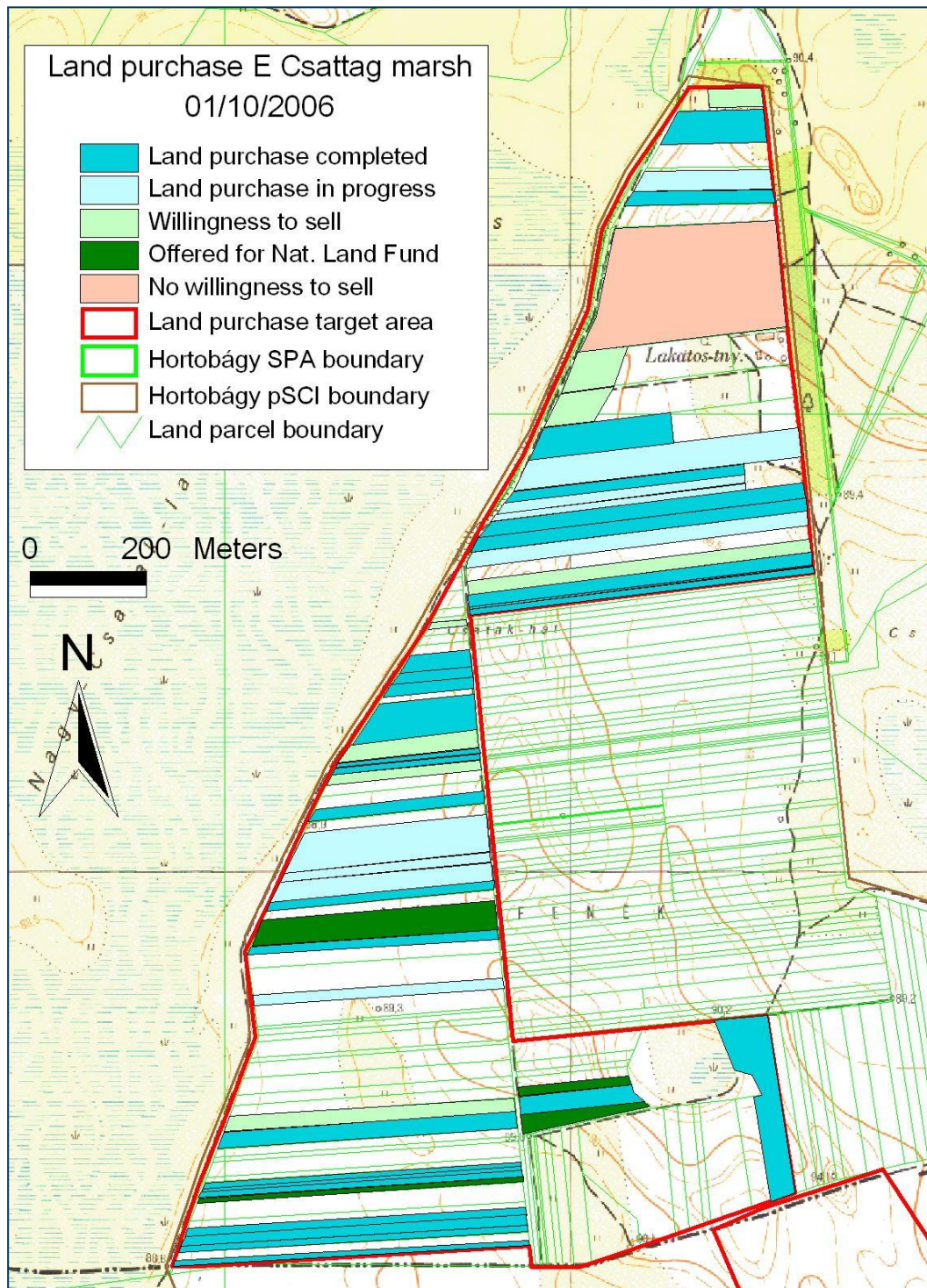
**Map 1.** Map of the project area with geographical names mentioned in this report. Colour code for background topographical map: Yellow – grassland, white – arable land, green – forest/wooded area, blue – wetland/marsh.





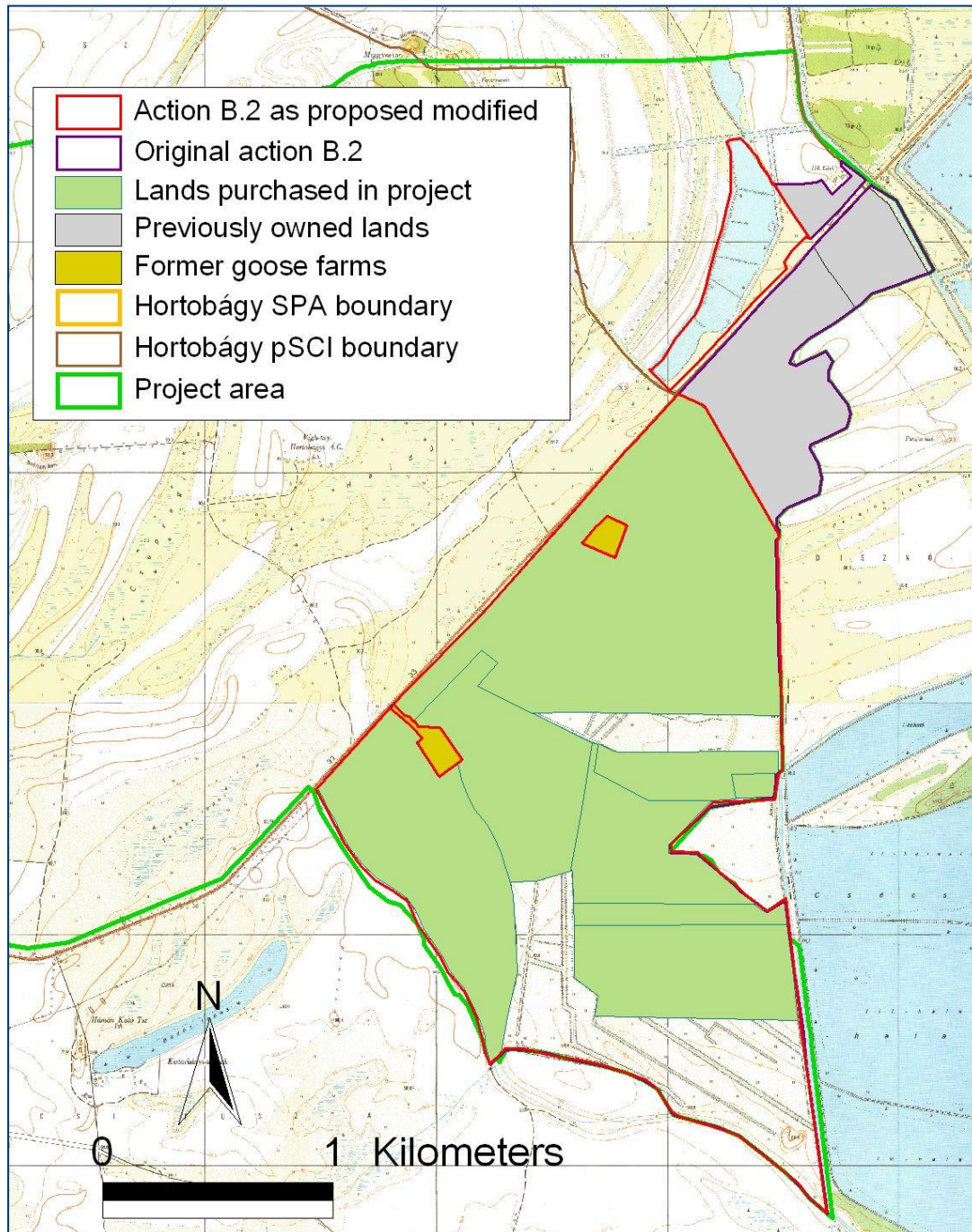
**Map 2.** Land purchase target areas in action B.1 (as proposed in request for project modification).





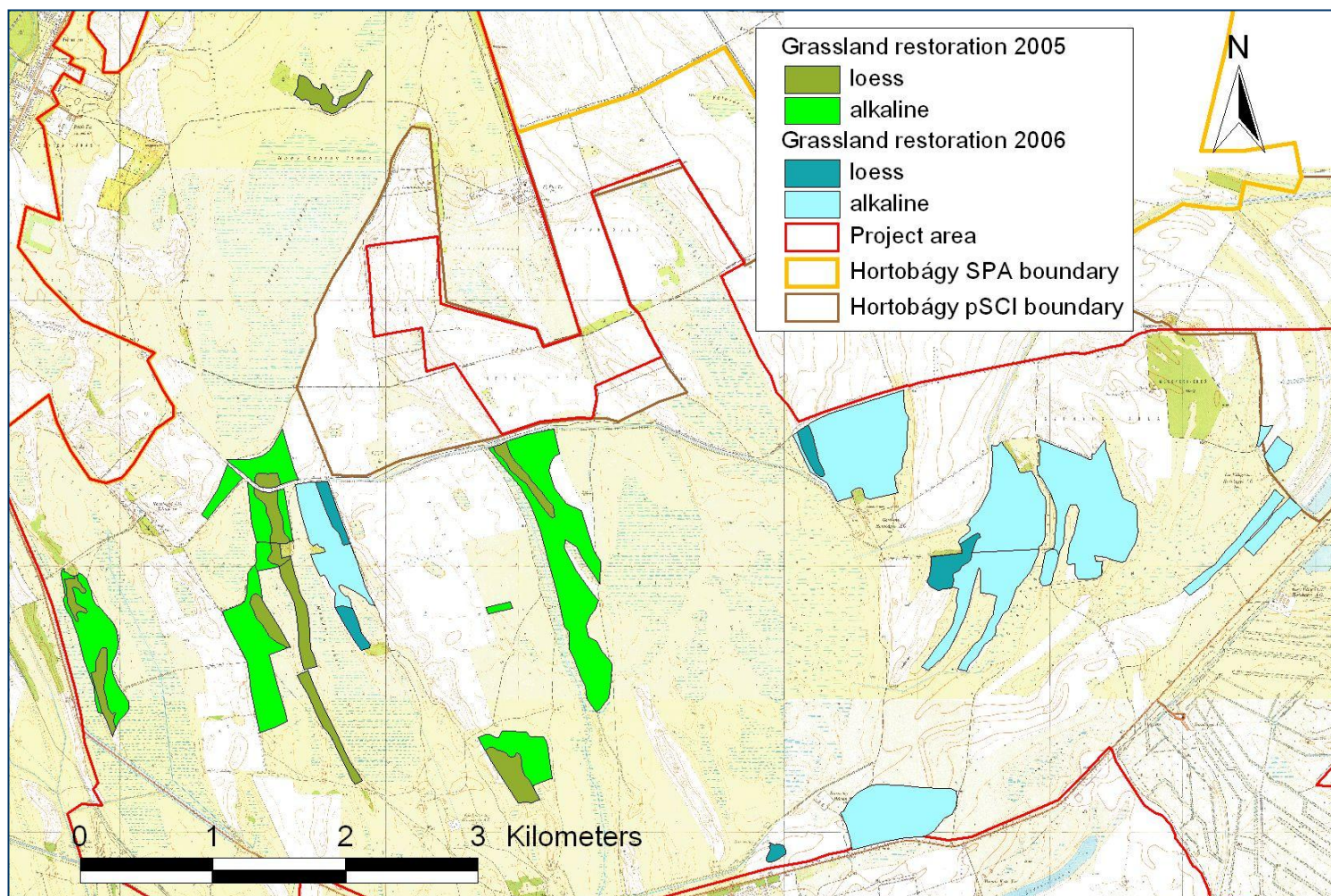
**Map 3.** Land purchase progress on E shore of Csattag marsh as of 01/10/2006 (action B.1). The aim of land purchase is to restore a grassland buffer zone of at least 50 m from the marsh edge. Land parcels purchased or in the contracting phase amount to 28.2 ha, whereas the total land purchase target is 68 ha in this area. “Willingness to sell” indicates lands where owners have been contacted and are willing to sell their land (5.5 ha). As for NLF lands, HNPd in cooperation with other LIFE-Nature projects has filed a request to the Ministry of Environment to initiate legal steps with the Ministry of Agriculture to overtake NLF lands in Natura 2000 areas for nature conservation purposes. For the owner of the largest parcel, indicated as “no willingness to sell” (5.5 ha), HNPd plans to offer this farmer parts of land parcels of similar size and better quality outside the buffer zone. The entire area shown is within the Hortobágy SPA.





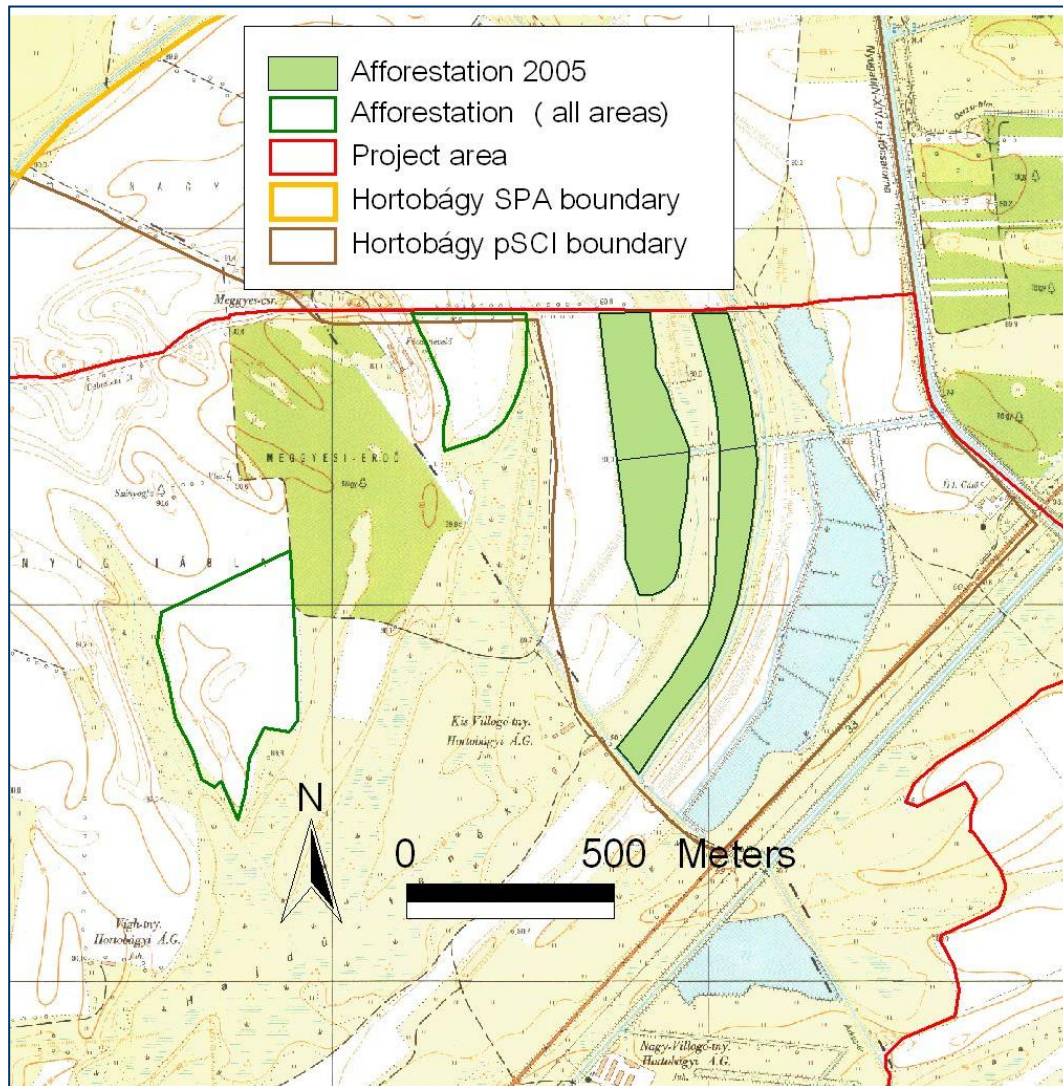
**Map 4.** Land purchase in the Villongó area (action B.2). As the original objectives of this actions (B.2: elimination of goose farms, D.1: sheep-grazing instead of goose-farming) have been completed, and because the largest area (that around the larger, northern farm) could be purchased at higher prices than foreseen, HNPd has proposed to stop further land purchase in the area (subject to project modification). The entire area shown is within the Hortobágy SPA.





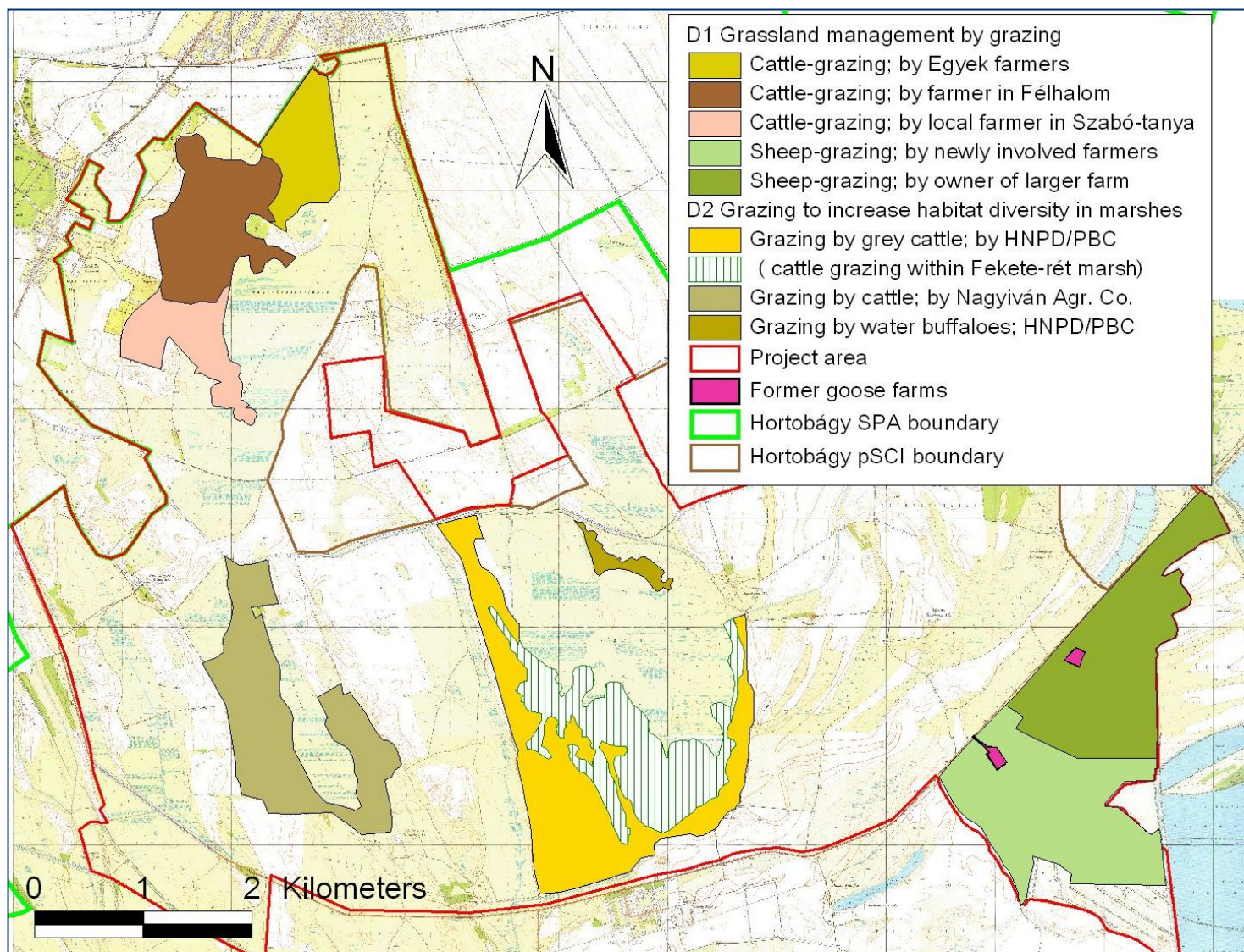
**Map 5.** Areas where loess and alkaline grassland restoration took place in 2005 and 2006. In the first two years, grassland restoration has been started on 403 ha former arable lands (or 59% of 680 ha planned in the entire project). The restoration targeting pannonic loess steppic grasslands (Natura 2000 priority habitat, code 6250) has been carried out on 70 ha (or 82% of 85 ha planned in an ideal case). The restoration of pannonic salt grasslands (Natura 2000 priority habitat, code 1530) was started on 333 ha. Based on considerations laid out in the MP and the TIMPGR, loess grassland seed mixture was seeded on loess soils on plateaus higher than 90 m a.s.l., whereas all areas lying lower than this were seeded with alkaline grassland seed mixture.





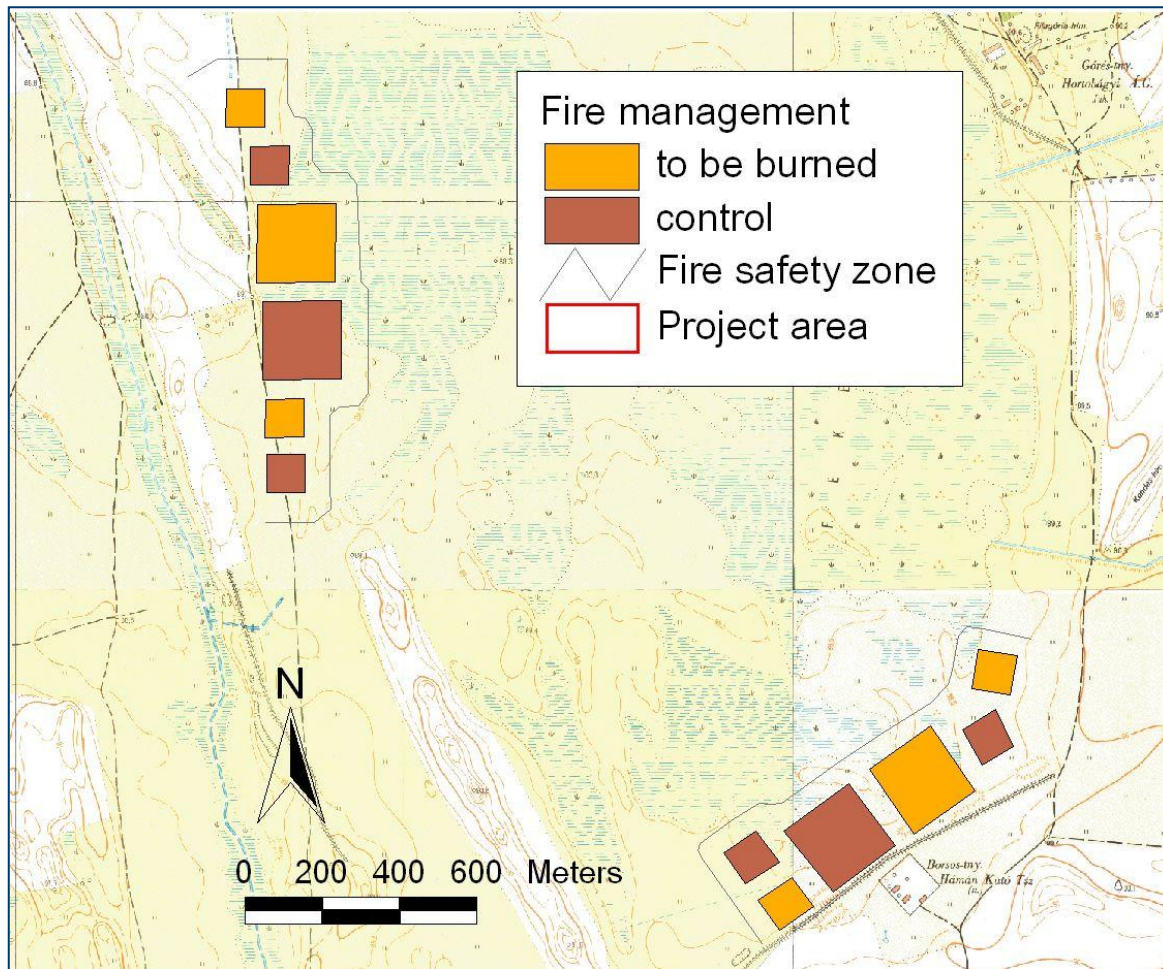
**Map 6.** Areas where afforestation took place in autumn 2005. Two alluvial loess plateaus, once surrounded by ancient flood waterways, have been seeded with acorns.





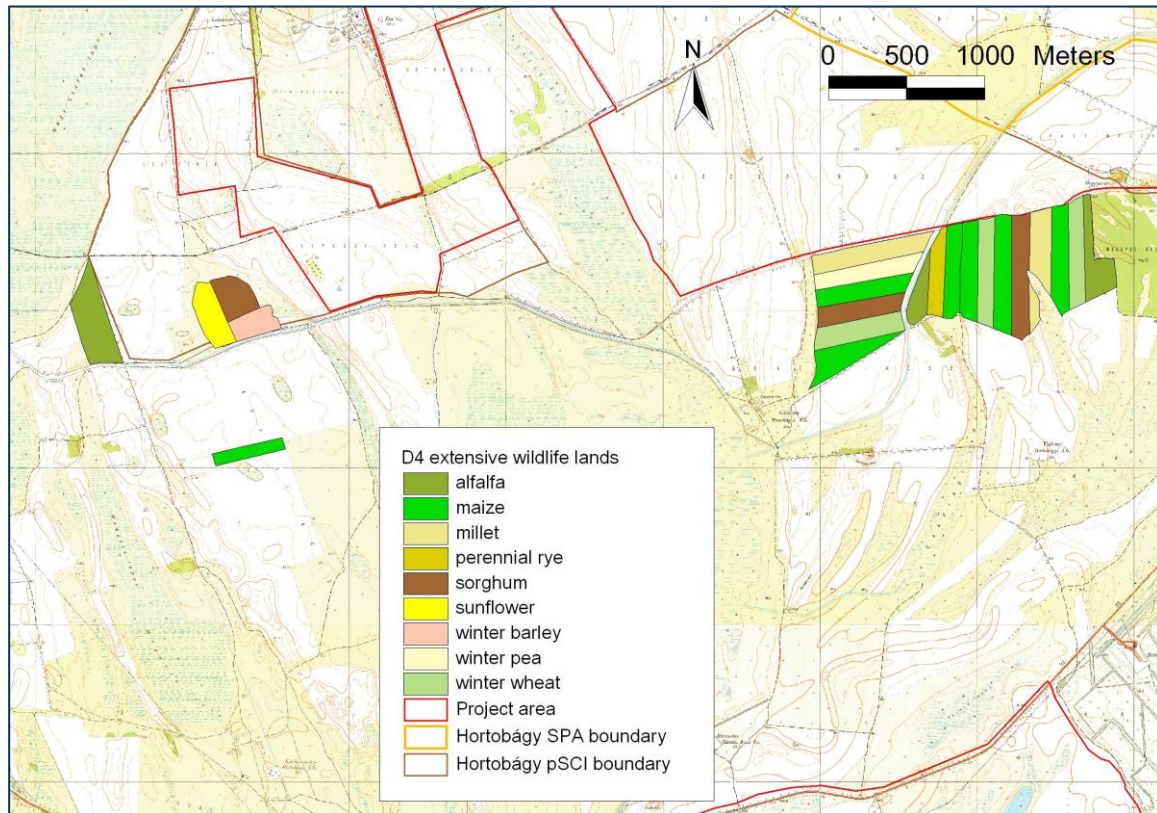
**Map 7.** The grazing system operating in the project area from 2006 (action D.1 and sub-action D.2/1). Sheep-grazing, part of D.1, is present in the Villongó area (SE project area), and the rest of the grazing management is done by cattle (or water buffalo, not part of this project).



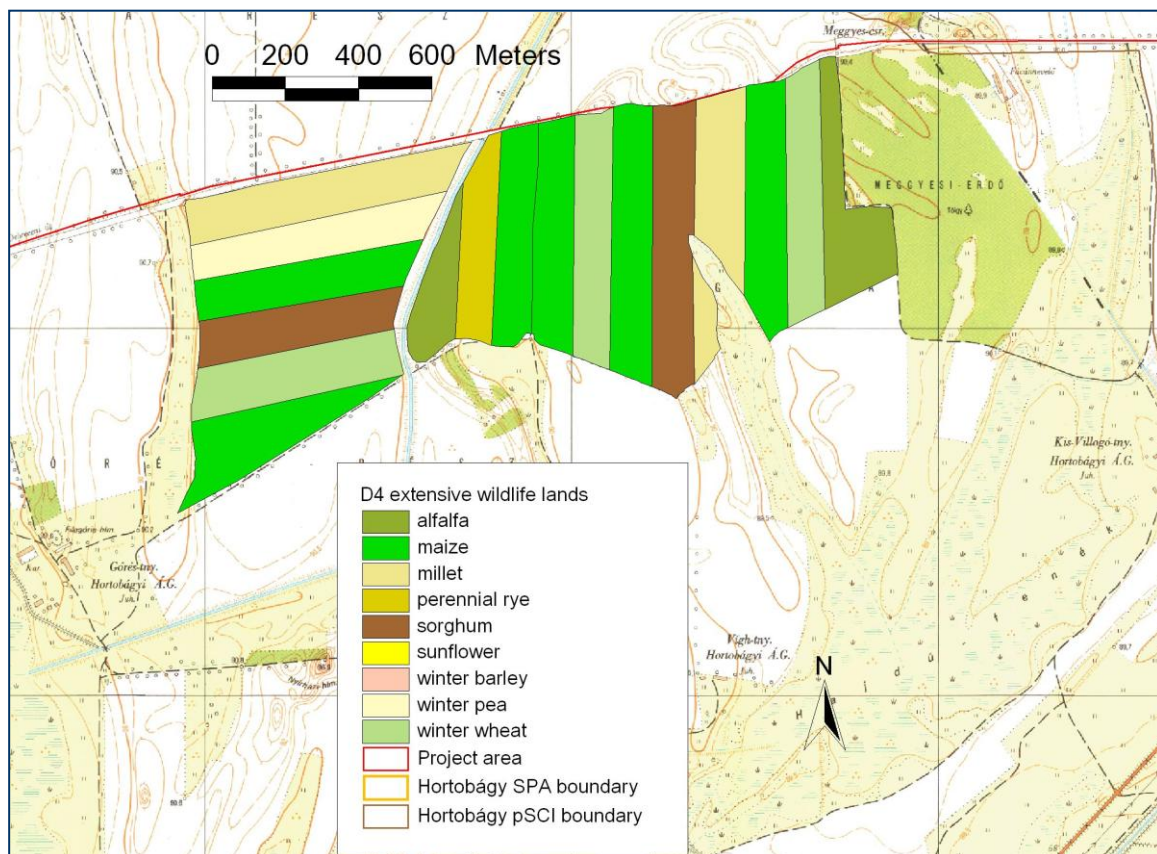


**Map 8.** Concrete plans and preparations completed in autumn 2005 and 2006 for burning marsh edges to open up homogeneous reedbeds (sub-action D.2/2). Plots were designated by GPS and reed were cut/flattened around the plots by a Seiga machine. Fire safety zone indicates the line of intact reed closest to the experimental plots (at least 50 m from burned areas).





**Map 9.A.** Overview of lands with extensive cultivation for wildlife.



**Map 9.B.** Detail of the wildlife lands in the E part of the project area (crop structure 2005/06).



## A.2 MISCELLANEOUS RELEVANT DOCUMENTS