



**LIFE04NAT/EE/000072**

**FINAL REPORT**

***Covering the project activities from  
1.04.2004 to 31.05.2009***

Reporting Date  
**18.10.2009**

LIFE PROJECT NAME

**Arrangement of Spotted Eagles and Black Stork  
conservation in Estonia (EAGLELIFE)**

Data Project

Project location	Estonia
Project start date:	01/04/2004
Project end date:	prolonged up to 31/05/2009
Total Project duration:	62 months
Total budget	€ 846 618
EC contribution:	€ 634 963
(%) of total costs	75%

Data Beneficiary

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## **KEY-WORDS**

**Estonia, lesser spotted eagle, greater spotted eagle, black stork, conservation action plan, favourable conservation status, Natura 2000, flood-plains restoration, forest, public awareness, land owners, sociological study**

## **ABBREVIATIONS**

**EAGLELIFE –project acronym**

**MoE – Ministry of Environment**

**SNCC – State Nature Conservation Centre**

**EB – Environmental Board**

**EIC – Environmental Investments Centre**

**LSE – Lesser Spotted Eagle**

**GSE – Greater Spotted Eagle**

**BS – Black Stork**

**FR – Final Report**

**TR – Technical Report**

**IR – Interim Report**

## SUMMARY

Current Final Report of EAGLELIFE project describes the activities from the beginning of the project 1.04.2004 up to end in 31.05.2009. In April 2005 has been reported the 1<sup>st</sup> progress of the project, in July 2006 submitted Interim Report and in April 2007 submitted 2<sup>nd</sup> Progress Report, and in June 2008 we sent 3<sup>rd</sup> Progress Report.

**Project goal:** the favourable conservation status for species of European importance as *Aquila pomarina*, *Aquila clanga* and *Ciconia nigra* has been secured in Estonia.

Ministry of the Environment is responsible in co-ordination of species protection at state level in Estonia. The results of the project will help governmental institutions to arrange the management and preservation of *Aquila pomarina*, *Aquila clanga* and *Ciconia nigra* habitats/nesting sites according to the aims and priorities of composed management plans, facilitates development of further conservation measures and strategies (taking into consideration the wider scope of protection needs – the issue of foraging areas, compensations for private land owners, etc.).

The more specific **objectives** are:

- To guarantee the habitats preservation and populations stability (or increase) of European conservation priority species *Aquila pomarina*, *Aquila clanga* and *Ciconia nigra*.
- To arrange the management and preservation of *Aquila pomarina*, *Aquila clanga* and *Ciconia nigra* habitats /nesting sites according to the aims and priorities of composed management plans.
- To promote the public awareness on the habitat requirements and conservation needs of European conservation priority species and to direct society to more wildlife friendly attitude.
- To develop the international co-operation in order to facilitate the *Aquila pomarina*, *Aquila clanga* and *Ciconia nigra* conservation including public education efforts.
- Management and preservation of Natura2000 biotopes (flood-plains) in pilot districts to guarantee the presence and quality of foraging habitats for *Aquila pomarina*, *Aquila clanga* and *Ciconia nigra*.
- To elaborate relevant measures in order to facilitate the Ministry of the Environment in preserving the *Aquila pomarina*, *Aquila clanga* and *Ciconia nigra* habitats in private lands.

The Final Report is composed according base form in LIFE website, action-by-action way. By every action the following sub-chapters are described:

Objectives

Starting time

Progress (divided if necessary)

Delaying

After-LIFE planning

Current status

**The key deliverables and outputs of the project:**

1. DVD “ABC of Estonian Eagles”
2. Guidelines for preparation of extra pages
3. Conservation Action Plan for Greater Spotted Eagle (*Aquila clanga*)
4. Updated Action Plans for Lesser spotted Eagle (*Aquila pomarina*) and Black Stork (*Ciconia nigra*)
5. Booklet “Eagles and Black Stork in Estonia”
6. Reports of sociological studies 2008-2009
7. 185 found and protected nests of target species
8. 76,8 ha of forested land purchased around Black Stork nests
9. 2654 (2854) ha of flood plains restored and future maintenance organized
10. Eagle Centre and international co-operation established and functional
11. Web cameras launched and systems developed
12. Using of new technical solution - GPS tracking for species’ conservation purposes

## INTRODUCTION

The **overall goal** of the project is to arrange three species (*Aquila clanga*, *Aquila pomarina* and *Ciconia nigra*) conservation in one of the member states of EU – Estonia. As Estonia has among the EU states relatively good natural condition, the threatened species have found here suitable habitats for nesting. Due the quick economical development the remote areas are more and more the spots of different interests. Therefore is needed to preserve the natural areas and the Natura 2000 network is ideal for that. To protect with Natura 2000 tools the threatened species, there is needed to work seriously. One the quite serious work is current project, willing to keep or even arise the favourable status of three species of European conservation concern.

**Specific objectives** for that are:

To guarantee the habitats favourable status

To compose and execute the action plans for conservation

To promote the public awareness according nature (conservation)

To develop the international co-operation, as the birds do not recognize the state borders

To manage and preserve habitats the species are living in

To facilitate the official responsible organization – Ministry of the Environment by the protection these species and their habitats.

### **Quick overview of actions in EAGLELIFE:**

A1 – detailed action plan and time table are mostly implemented

A2 & F2 – Steering committee is formed, changed by need, implemented

A3 – Complex inventory finished, lot of new nests (185) are protected as result of A3, studies and conclusions for to evaluate previous protection regime are made, partly are used results of Latvian colleagues studies, accordingly micro reserves are established or will be established soon.

A4 – Sociological study we recommend for every project about awareness raising - was repeated before the end of project. Results are useful for everyday work with media, owners, etc. Results are available in website and submitted with FR

A5 – Guidelines for to work with restricted land owners are elaborated, but will updated continuously, if needed. Last version is available in website.

A6 – Updating of species action plans (AP) finished, but formally not approved. AP for *A. clanga* is composed and signed by Ministry. Updated APs for *A. pomarina* and *C. nigra* will be approved by Ministry in November (confirmation of Ministry in Annex)

A7 – Study of foraging success and effect of foraging biotope management got clear results, that in current situation without of management of foraging areas these will after some years lose their quality (grasslands for spotted eagles and streams for black stork will be covered with bushes). Using of GPS transmitters got also great side effect (base for awareness rising activities, media interest, home range investigation, migration and wintering data etc.) Good opportunity to go ahead with this knowledge...Implemented.

B1 – Purchase of critical land plots is implemented, 76,8 ha is aquired within the project.

D1 - For management of target species habitats Soomaa National Park was chosen, as the very suitable area for target species, especially spotted eagles. In Soomaa NP the overgrown with bushes flood plains will restored. But in project modification are added four different flood-plains to the project areas (Matsalu, Käntu-Kastja, Alam-Pedja and Keeri-Karijärve) to reach project goals. That preserves a lot suitable foraging areas for target species. 2654 ha is restored and future management perspective is quite well in all restored area.

Many (E) actions are targeted for to turn the overall public and land owners attitudes more nature friendly.

E1 – Video-clip has turned to full DVD, including two films and programme “Guide to Eagles”, all 120 DVDs are disseminated. Copyright is with beneficiary.

E2 – Booklet “Eagles and Black Stork in Estonia” is published in Estonian (8000), in English (1500) and in Russian (500). About 1/3 is disseminated, but after-LIFE projects will continue this. Positive feedback we got from media and directly from target groups.

E3 – Extra pages for land owners should build the knowledge and possibility to protect by landowners their eagle or stork (additionally to legislation). In February-March we finished with this action, but will continue with help of after-LIFE (nationally funded) projects in February 2010.

E4 – Seminars for target groups were very successful and interesting, target is reached, but we have been continued with action after termination of EAGLELIFE.

E5 – Web site has information in three languages, and probably most attractive topic there were webcams on black stork and eagles nests (installed only for breeding season), also webcam on eagles feeding place in wintertime. These are linked to [looduskalender.ee](http://looduskalender.ee) website for wider usage. About 8,3 M visitors during three seasons were counted. There are some opinions, that our webcams have best quality among similar remote ones. In [looduskalender.ee](http://looduskalender.ee) we kept diary of webcam, established forums, and write about birds travelling with transmitters. Has been and will be continued.

E6 – Media work has been extremely successful, especially due using of satellite transmitters and data from there and due having online webcams on the nests. Above 120 articles have published in different media + interviews for radio and TV. Will continued.

E8 – Eagle Centre is established. International co-operation was successful, different meetings, conferences, workshops are organized, colour ringing programme for spotted eagles initiated. In national level EAGLELIFE has initiated completely new stage in Eagle Club with its investments and possibilities. Implemented. Has been and will be continued.

F1 – everyday management we wish to be better, but there is no big problems also (some delay with reports, some incompetence at the beginning, too much work on manager etc). Layman's Report completed and disseminated. Basically implemented.


F3 – Monitoring of results contains some A3 actions (new nests, measuring of productivity of target species) and checking of violations on nest sites. Action is ongoing, the same data is to be gathered within official monitoring scheme of target species.


The actions of EAGLELIFE project were performed within great number of Natura areas of Estonia, exact number is difficult to confirm, as field works for nest search and following of tagged birds are not easy to locate on map. Preliminary number of Natura 2000 areas could be over 50, where have been made some works.


### **Project modifications:**

For to fulfil project goals, the three substantial modifications were requested and approved by Commission:

 Adding of new flood plain restoration sites 8/05/2008


 Postponing of project end date for one year 8/05/2008


 Changing of partner name (actually four times) last 6/04/2009


 Adding of new land acquisition sites last 6/04/2009

 Budget modification 6/04/2009



 Adding of co-financier 6/04/2009

 Purchasing the land to the Beneficiary 6/04/2009

 Reducing of Partners (MoE) contribution 6/04/2009

### SUMMARY OF DELIVERABLE PRODUCTS

Product	N° of reference action	Realizing date	Submitted	Deadline
Detailed project action plan ready	A1	20/06/2004	(not delivered, explanation in Progress Report N°1)	31/05/2004
Video-clip ready	E1	25/05/2005	With IR 30/06/2006 +Progress Report N°2	31/03/2005
Results of sociological study (2 parts) Final results with Final Report	A4	6/07/2005	With IR 30/06/2006 +Progress Report N°2	31/12/2004
DVD ‘ABC of Estonian Eagles’ 100 ex. with booklet	E1	27/03/2006	With IR 30/06/2006	-
DVD archive material from 1935 – the newsreel ‘Lost of the Golden Eagle’ 50 ex	E1	27/03/2006	With IR 30/06/2006	-
Guidelines for preparation of extra pages	A5	30/05/2006	With IR 30/06/2006	31/03/2006
New management plan for <i>Aquila clanga</i>	A6	18/03/2006 (signed by MoE)	With IR 30/06/2006	31/03/2005
Booklet “Eagles and black stork”	E2	26/01/2009	FR	31/03/2006
Extra pages for landowners	E3	30/03/2007 (third set 27/02/2009)	TR 2007	30/11/2008
Layman`s report	E7	31/05/2009	FR	30/04/2009
Audit report	F4	7/10/2009	FR	31/08/2009

## SUMMARY OF PROJECT MILESTONES

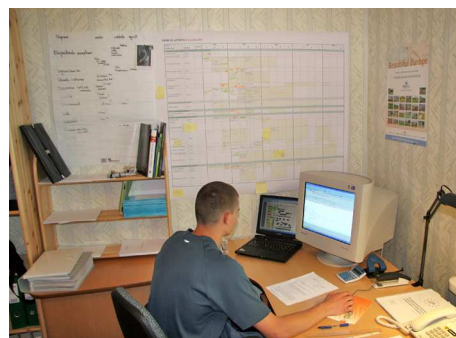
Milestone	Name or n° of reference action	Realizing date	Deadline
Full time project manager nominated	F1	01/05/2004	01/05/2004
Steering Committee formed	A2	28/06/2004	31/05/2004
Start of complex inventory	A3	01/06/2004	01/07/2004
Start of flood plains restoration management	D1	15/07/2004	01/07/2004
First educational lecture	E4	1/10/2004	31/10/2004
Sociological study carried out and analysed	A4	29/05/2009	31/12/2004
First article about the project	E6	25/11/2004	31/01/2005
First annual monitoring carried out	F3	30/12/2005	30/09/2005
Web page updated	E5	1/07/2005	31/03/2005
First international seminar	A7	5/03/2005	31/05/2005
1000 ha of flood plains restored	D1	21/09/2006	31/10/2005
Eagle Centre starts its work	E8	1/05/2005	31/01/2006
Complex inventory ready	A3	30/04/2007	31/03/2007
2000 ha of flood plains restored	D1	31/12/2007	31/07/2008
Foraging habitats usage criteria elaborated	A7	30/05/2008	31/03/2008
2800 ha of flood plains restored	D1	2654 (2854) ha 1/10/2009	31/01/2009
Forestlands purchased	B1	28/05/2009	30/03/2009
Species management plans updated	A6	15/09/2009	31/12/2008
Financial audit	F4	7/10/2009	31/08/2009

## A 1 Elaboration of detailed project action plan and timetable

**Objective:** The detailed action plan and timetable are for fulfilment of the project objectives and implementation of different actions during the project time by the reasonable way.

**Started:** in May 2004

**Progress:** According to the project proposal, the deadline for detailed action plan and timetable was a month after the nomination of the project manager, i.e. by June 2004. In general, the activity was implemented by time. The product, a handmade wall table has been continuously updated, changed and refreshed according to the improvement of our knowledge and up-to-date situation. For every basic activity a special sub-action plan is established, and there were nominated the coordinators for different actions. By this activity also the preliminary cash flow table taking into consideration the payments of partners and Commission during the project implementation time has been elaborated. The Detailed action plan and time-table is the single hand-made work sheet so we added the photo about the table like it looks in our office. The activity A1 is involved in the daily management (F1). Time table and action plan were revised according project prolongation and Additional Clauses (second and third).



**Drawback:** In the application was written one of the deliverables to be Time table. Sending the 'real deliverable' seems a bit pointless. By the preparation of the application we did not understand correctly the word 'deliverable' and that causes some misunderstanding concerning to that topic.

**Status:** Implemented

## A 2 & F 2 Formation and work of project steering committee

**Objective:** Effective implementation of the project and securing the participation and representation of all interested parties.

**Started:** in June 2004

**Progress:** Steering Committee was established by the end of June 2004 (delay 1 month) and first meeting was organized by 21.12.2004. There was decided that meetings should be organized at least once per three month. However, we had not decided particular dates for meetings, but these were organized according to the real need. Therefore, the meetings were organized not exactly once per every three months. All together 10 meetings have been organized during project (21.12.04; 24.03.05; 16.06.05; 6.10.05; 27.01.06; 27.03.06; 21.04.06; 17.10.06; 22.02.07; 23.08.07; 25.02.08; 20.02.09). Sometimes, also additional persons were participating in meetings to discuss about certain problems (eg land acquisition, nature conservation reorganizing, new species conservation specialist in MoE). Most aspects being discussed about were connected with actions D1, B1 and A7.



Since only very few compensation payments (fuel cost for travel and parking) by the members of Steering Committee has been made as no reclaims prepared for that.

Within Steering Committee eight partner representatives were involved up to 20.02.07. Since 19.01.07 is excluded from the Steering Committee vice-chancellor Olav Etverk, as he finished the work on relevant position. New member has not involved, as former representative of juridical department of MoE has nominated as head of nature conservation department. We excluded Mati Kose from the SC member list, as only once he took part in meetings. And during the preparation of modification request we involved SNCC project's specialist Kaia Treier. Last list of Steering Committee:

MoE nature conservation dep.	<b>Andres Kruus</b>	6262 870	andres.kruus@ekm.envir.ee
MoE nature conservation dep.	<b>Riinu Rannap</b>	6262 889	riinu.rannap@ekm.envir.ee
Soomaa NP/SNCC	<b>Gunnar Sein</b>	5120 974	Gunnar.Sein@mail.ee
SNCC/EB	<b>Kaia Treier</b>	627 2187	Kaia.Treier@lk.ee
Private Forest Association	<b>Mihkel Maala</b>	5163 117	m.maala@mmh.ee
Estonian Ornithological Society	<b>Andres Kalamees</b>	5237 544	andres.kalamees@eoy.ee
Eagle Club	<b>Riho Männik</b>	5172 636	riho@saarepeedi.ee

**Manager's opinion:** From point of view of project manager not every Steering Committee meeting gives remarkable benefit for the project implementation, but it needs quite a lot of time to organize the meetings and prepare the presentations, materials etc. Maybe its personal problem of current manager and project, but the obligatory meeting every quarter seems not very reasonable as the project staff meetings take place almost every month (sometimes even more dense). Nowadays almost discussion is possible via digital channels; therefore suggest not demanding meetings of Steering Committee. These will better to organize if necessary. Less meetings were organised in EAGLELIFE project due to the reasons listed above and less meetings had no effect on the project implementation as the key personnel was in regular contact by phone, e-mail and action group meetings

**Status:** Implemented

### A 3 Complex inventory on habitat requirements and habitat quality

**Objective:** To find more nest-sites and to elaborate optimal measures for conservation of *Aquila pomarina*, *Aquila clanga* and *Ciconia nigra* habitats.

**Started:** in April 2004

**Progress:** According to the detailed action plan, main efforts were addressed to the searching of unknown nest-sites because only known nest sites can be protected and used for the monitoring of results. Two different approaches were used:

- ✓ **Experts check the information about large nests found by people** (foresters, landowners, forest officials, hunters, etc). Remarkable number of contacts with people informing us about the nest locations were established on local seminars (E.4) for different target groups. Many contacts were also initialized by our web site and articles or broadcasts in media. Nests were checked mostly by EAGLELIFE staff and by members of EagleClub. During last period (2006-2007) also the communication with land owners within other activities in current project (A5; E3) initiated information about large nests in forest, known by local people.



Forester with found nest

- ✓ **Searching for the nests of target species during special fieldworks** (results are



displayed in table 2). First, we mapped breeding territories of eagles and black stork pairs during display flights in spring (April-June, using GIS). Secondly, the area was again visited in July to find nests (unfortunately, not every well-planned fieldwork resulted in nest finding). This two-step methodology was used because the visiting of the nest in spring may cause the failure of breeding. In this action EagleClub personal staff and members, EAGLELIFE project

personal staff and also the solitary experts (as external assistance) participated.

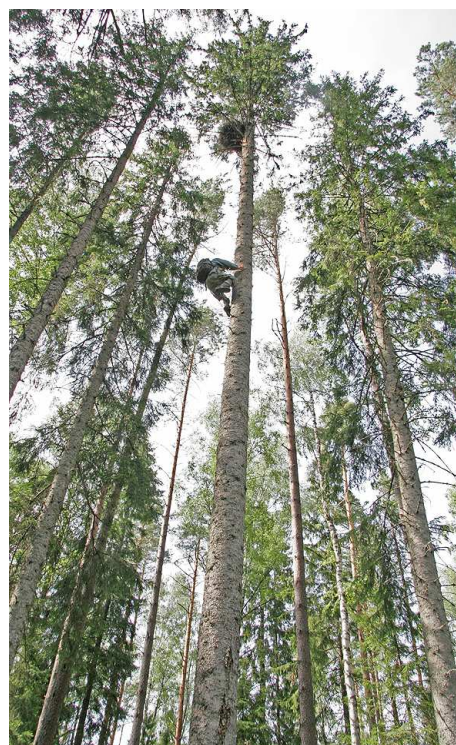
**Table 1.** New nests of Spotted Eagles and Black Stork found in 2004-2008 (since 2007 management of new nests within action F3)

	Found new nests					
	2004	2005	2006	2007	2008	Total
<i>Aquila pomarina</i>	38	48	43	31	25	185
<i>Aquila clanga</i>	1	2	3	0	1	7
<i>Ciconia nigra</i>	5	12	8	12	8	45



In addition to the project target species, large nests found by people belonged to the following species of conservation concern: 10 White-tailed Eagle (*Haliaeetus albicilla*), 2 Osprey (*Pandion haliaetus*), 1 Golden Eagle (*Aquila chrysaetos*) nests. All these nests were included to the national register. Other checked nests belonged to Common Buzzard (*Buteo buteo*), Goshawk (*Accipiter gentilis*), Honey Buzzard (*Pernis apivorus*) or were not identifiable (abandoned too long time ago). Some nests were occupied also by Ural Owl (*Strix uralensis*).

During July and August (September) every year, the inventory of registered nest-sites of target species was carried out (results are displayed in table 2). To this part of activity the checking included the occupancy, breeding success and the need of special management measures (repairing of nest, building of artificial nest, cutting some branches etc). Also following of conservation rules was checked during inventories, as much as that did not disturb additionally the birds on these territories. Usually the nests were checked by the same people, so changes on site (cuttings, melioration, etc) had to be noticed easily.



**Table 2.** Number of nests of target species checked during the inventory (2007-2008 in F3).

Species	2004	2005	2006	2007	2008	Total
<i>Aquila pomarina</i>	140	132	146	161	197	776
<i>Aquila clanga</i>	10	10	11	9	9	49
<i>Ciconia nigra</i>	71	80	88	77	103	419

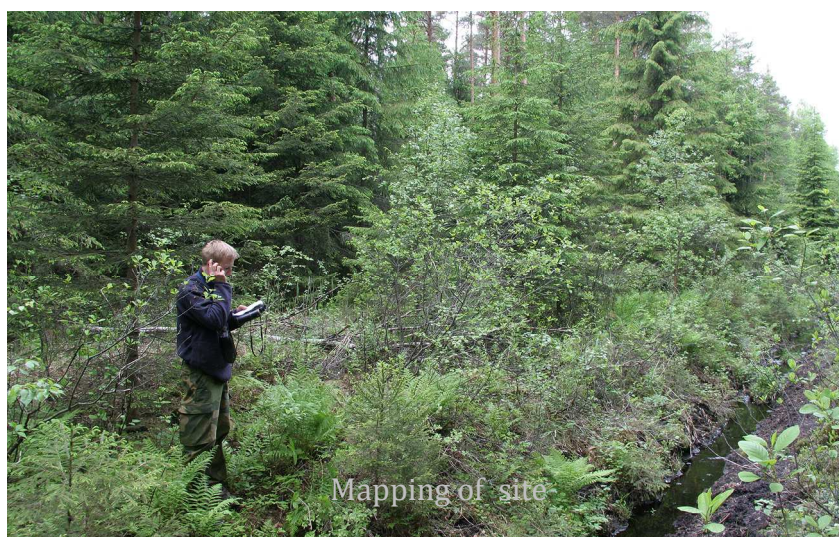
Within action A3 we took part in 4<sup>th</sup> International Black Stork Conference, held in Hungary 15-18<sup>th</sup> April 2004 and presented four presentations about the black stork situation and research in Estonia. Second, the International Workshop of Research and Conservation of the Greater and Lesser Spotted Eagle, held in Poland 16-18<sup>th</sup> September 2005. Two presentations about research and conservation of spotted eagles in Estonia were presented. (Further similar international events are made within E8)



The exceptionally strong hurricane at 9<sup>th</sup> of January 2005 caused the damage of several nest sites. Under activity A3 we built 11 artificial nests for Black Stork as near as possible to the location of former nest. For example, if only the bearing branch was broken, the artificial nest was built onto the same tree. We recognized that artificial nest could be inhabited as long as 16 years after the erecting...



To evaluate the protection regime around the nests we carried out a special study in 2005-2006. To analyze the effect of logging to the breeding of spotted eagles, we studied 119 nest sites of *Aquila pomarina* and 6 nest sites of *Aquila clanga*. For conclusions, only large *Aquila pomarina* sample was used while the limited *Aquila clanga* data may be used only for conservation of particular nest sites of this species. In the study, following methodology was used: 1) information about planned forestry actions near nest sites (in 300 m radius) 1995-2005 were gathered from both state and private forests; 2) this information was verified during fieldwork, when we also collected unregistered logging data; 3) the forestry activity near nest sites was related to the breeding success.



**Main results** were following. Forestry in 300 m radius has a negative impact to the breeding of spotted eagles: the proportion of successfully breeding *Aquila pomarina* pairs declined from 64% to 55%, and even to 38% in years with low prey abundance. The Estonian law prohibits automatically the logging in 100 m radius, but our analysis showed that in prey-poor years logging activities performed up to

100m and 100-200 m from nest have significant negative impact. Some impact have loggings in 200-300m of nest (table 3). Only logging in 100-200 m from the nest showed negative impact when all years were considered (table 4). Secondly, our results showed that the clear-cutting near nest site had much stronger impact than the selective cutting.

**Table 3** The impact of logging in different distances from nest sites to breeding success of *Aquila pomarina* (included only prey-poor years).

Distance between the nest and logging	Successful breeding (%)	Unsuccessful breeding (%)	Number of studied nests
Kuni 100 m	41	59	12
100-200 m	27	73	22
200-300 m	50	50	14
Not logged	55	45	139

**Table 4** The impact of logging in different distances from nest sites to breeding success of *Aquila pomarina* (all years included).

Distance between the nest and logging	Successful breeding (%)	Unsuccessful breeding (%)	Number of studied nests
<100 m	71	29	28
100-200 m	37	63	27
200-300 m	64	36	22
Not logged	66	34	222



Logging within 100m was performed only in few cases as illegal, mainly the nests were found already with logged surroundings, that's why we have quite remarkable sample of loggings within 100m automatically protected zone.

We planned similar study for Black Stork, but used results of similar study of Latvian colleagues for establishment of micro-reserves in Estonia. Latvian study shows, that 280m is the minimal distance for common forest management, in average (with 80% probability) not disturbing nesting of black stork. According that we established species protection sites (micro reserves) bigger as are (250m radius) automatic protection cycles. According special regulation 41 different black stork nest sites and 11 different greater spotted eagle nest sites outside reserves were protected as micro reserves in 2006. The annexes of mentioned regulation are approved by Ministry of Environment in 2007, 2008 and 2009.

(<https://www.riigiteataja.ee/ert/act.jsp?id=13133758>). All together within that regulation is involved 5621 ha of protected forests around nest sites.

Resources planned for black stork study we used for to search new nests, as it builds a base for protection of nest sites.

The results of studies lead to the following **suggestions**.

- ✓ The circle-shaped protection zone is usually not an efficient method for nest site protection in long term, but it should be used as an immediate protection zone after the finding of a nest. Nest site protection zones should be adjusted according to the natural conditions at each nest site. This means a formation of micro reserve around almost every protected nest.
- ✓ Nest protection zones may be divided into two parts:
  - 1) In the primary zone covering immediate vicinity of the nest of all three target species any logging activity should be avoided. This is supported also by the fact that *Aquila pomarina* and *Aquila clanga* prefer in Estonia old spruce stands, which are very sensitive to wind-damage and difficult to manage by selective cutting. On the other hand, as spruce forests are often sensitive to the damage caused by the spruce bark beetle, it may be necessary to remove wind-fallen trees from the primary zone under strong control. For *Ciconia nigra* also spruce trees around nest tree are preferred and wind damages are in over-matured stands appearing if there is neighbouring forest managed via clear-cuts.
  - 2) In the secondary protection zone, which surrounds the primary zone, a small scale logging activity, which does not change the forest structure, retains potential nest-trees and causes no threat to the primary zone, may be allowed outside the breeding season. However, as the exact logging time and number of logged trees is difficult to inspect before that happens – such activity should be kept in minimum.
- ✓ For *Ciconia nigra* in some cases clear-cuts are even positive, if situated in moderate distance (above 300m) – young storks have there easy possibility to obtain their first foraging and flying skills, what is quite difficult in fully forested area. That is not concerned on old natural forests (having clear areas inside due the forest succession), but previously managed (one aged) forest.

For the implementation of the activity A3 in year 2004 we used mostly the financial contribution of EagleClub. Since November 2004 up to March 2007, the part-timely hired EAGLELIFE inventory specialist has been responsible for the smooth implementation of the activity. For the most intensive season time were hired some specialists and also used the independent experts.

**Using of results:** The results of A3 (study and inventory discribed above) we used by establishment of micro reserves around the target species nests. Also we used the results of activity A3 by implementing of activities A5, A6, A7, E2, E3, E4, F3 and for update the official registry of nature protection. Within F3 there are included some similar activities as in A3, like



new nests search, checking of obtained information from besides (foresters, land owners etc.) and gathering data for to estimate overall breeding success of target species.

**Status:** Implemented

## **A 4 Sociological study**

**Objective:** To find out the public and landowners' (restricted by eagle protection zones) knowledge and attitude towards the eagles and black stork conservation. Also, the results help to elaborate proper training programs according to the needs of target groups. Action is necessary in order to promote properly the public awareness on the conservation needs of the species.

**Started:** in November 2004

**Progress:** In the detailed project action plan we decided: if the overall study among the general target group will not give the representative sample of restricted landowners, the second study should be separately carried out among the restricted landowners. The study was ordered in the beginning and near the end of project as external assistance from special professional enterprise (Turu-uuringute AS), but prepared thorough dense co-operation with EAGLELIFE staff.

For the exact comprehension the project staff met three times with the representative of selected enterprise, prepared the questions and telephone database of restricted land owners. During the project we come to decision that it will be reasonable to repeat the study by the end of project and that was supported by Commission (24/07/2007). One of the repeated studies was paid by Eagle Clubs additional contribution and other part of EU contribution by beneficiary.

### **Main conclusion of two studies (2004 and 2008) about overall public attitude:**

- In general, the results of the surveys conducted in 2008 and 2004 differ little, although there is some notable progress in people's awareness of endangered birds. The most positive changes have taken place in the understanding of those residents who have had contact with endangered birds and to whom the main focus of the current informing work has been directed.
- As compared to the earlier results, the role of eagles in Estonian nature and their endangered situation are now somewhat more recognized. They are seen as a threat to our fish and game resources less often than before.
- Among the respondents in whose home surroundings there are birds nesting, the attitude towards creating a protected area for eagles or black storks on their lands has become somewhat more concrete – there are slightly more of those who would consent to that than before, but also those who are opposed. There are, nevertheless, very few direct opponents (8%).
- The main reasons why people do not want a protected area on their lands are the restrictions in economic activities.
- People, in whose home surroundings the target species nest, expressed a keener interest in their lifestyles and wellbeing than before and would be more actively ready to do something for the benefit of the birds.
- The most important sources of information regarding the birds are still radio and television, but the role of the Internet has also become noticeably more important. Personal contacts, school, and thematic events have become more relevant than before.
- Nevertheless, 80% of the respondents admitted that they are insufficiently informed, of whom over half do not even want to learn anything more on that issue.
- Being uninformed and lacking the desire to receive information is considerably higher among non-Estonians, particularly among the non-Estonian speaking population of small towns in North Estonia, than among Estonians, although 40% of non-Estonians also have knowledge of and interest towards the given topic.
- Informing work continued to be held as the most important step that should be taken in the protection of the birds.

- Regarding conditions for which people would be ready to donate money, the protection and maintenance of nesting areas and creating protected areas were emphasised. People would also be ready to give personal money for informing work and the conducting of necessary research.
  - The respondents who had closer contacts with the birds also attached more importance to direct communication with the involved land owners and resolving issues related to compensations.
- In terms of knowledge regarding the birds, the younger and particularly the youngest generation was weaker than the older generation. By regions, the awareness and activity was lower in Tallinn and Ida-Viru County.

### **Summary of two studies among restricted land owners:**

- The great majority (74%) of land owners who “own” endangered birds have positive feelings towards the restrictions, 20% have rather positive or (few) completely negative feelings. According to the average assessment, the general attitude towards the restrictions has slightly cooled, although, on the whole, the percentage of those opposed to the restrictions has not increased.
  - The main cause of negativity is the loss of economic profit; the main positive aspect is the contribution to the preservation of endangered species.
  - The majority (80%) of land owners considers creating protected areas around nests to be necessary and justified; this perception has considerably deepened as compared to 2005. Almost everyone shares the opinion that eagles and black storks play an important role in nature and, as compared to a survey conducted in 2005, the belief that these birds can be regarded as the symbols of nature conservation has become significantly more widespread.
  - It can be said that the protection of both eagles and the black stork is valued more today than it was in 2005; however, the current situation requires more attention to be paid to economic aspects than was done before.
- Confirming the aforesaid, almost all respondents (92%) deemed state compensation for the non-management of forest necessary. Such an expectation of the state has become noticeably stronger when compared to 2005.
- In addition to the fixation of compensation mechanisms, people most of all expect the state to provide information and education related to nature conservation (32%) – evidently for society as a whole. From nature conservation organisations people most of all expect annual information regarding the wellbeing of birds nesting in the immediate vicinity (45%). Respondents continue to be concerned that their activities might be restricted even after the birds have already left the area.
  - Most of the respondents, more than in 2005, nevertheless consider themselves sufficiently informed regarding eagles and black storks, although more than one third of the respondents would want to receive even more information. The proportion of those who are not interested in information has somewhat increased (11%). Private land owners are more interested in information.

The LIFE and Natura 2000 logos are added and reports of both studies are submitted with current report (Annex 13).

**Using of results:** The results of the sociological study have been used and will be used for actions A5, E4, A5, A6, E2, E3, E5, E6. The study helps to assess the efficiency of EAGLELIFE project.

**Manager’s opinion:** We suggest to use similar studies also for other projects, it gives lot of information for the smoother implementing of the project, especially for awareness arising activities.

**Status:** Implemented

## **A 5 Development of guidelines for elaboration of additional criteria's for conservation obligations**

**Objective:** If owner is willing to protect the nest site on his land, it should be possible and supported by specialists. The relevant guidelines will be developed.

**Started:** in September 2005

**Progress:** the activity is nearly ready. By the end of April 2006 we composed the document 'Guidelines for working with land owners'. The out print of this was added as deliverable to the IR 2006, final version is submitted with Final Report (Annex 15). By the composing of A5 Guidelines the results of actions A3, E4, A7 have used.

The additional protection criteria should take into consideration the concrete natural conditions around every nest-site and give exact guidelines for the landowner. It does not mean only the possible actions in forest around the nest, but also activities in foraging areas situated nearby (if they are on the landplot of target person).

By the final development of guidelines the last results of activities A3 and A7 were used.

We developed also the form for the restricted landowners to inform about the last-years success of 'his/her personal' eagle or stork pair. As the most of target group have the spotted eagle nest within their land, the last four year data will be included to the information. It covers all the cycle of rodents, which is important since the nesting success of spotted eagles depends mostly on abundance of rodents.

**Using of results:** The Guidelines have been used and will be used (after-LIFE) for composing the extra pages for restricted landowners by project staff, also the nature conservation officers of county departments of MoE and EB have asked the copies of the document. By the composing stadium of the Guidelines we visited the SNCC/EB and other nature conservation officers (e.g. county departments and MoE). As the Guidelines mostly will spread online as .pdf document – we could update it by receiving new data. If there appears any need for paper document, it is easy to print it out. Last update was made in online guidelines in September 2008.

**Status:** Implemented

## **A 6 Updating and reviewing the management plans**

**Objective:** New Conservation Action Plan for *Aquila clanga* (for years 2006-2010) composed. *Aquila pomarina* and *Ciconia nigra* action plans updated and suggestions for further conservation actions and recommendations for nest site management incorporated with the plans.

**Started:** in November 2004

**Progress:**

**Greater Spotted Eagle.** The new Conservation Action Plan for *Aquila clanga* had to be compiled in March 2005, but due the different reasons we finished the draft of Plan in January 2006.

At 18.05.2006 the plan was accepted by Ministry of Environment (decree No 610, submitted in Annex 1). The delaying of the Action Plan upgrade did not affect the real conservation work. All proposed actions were initialized, supported and in progress. If some actions were not initialized, the reason is mainly the lack of experts. As the full Action Plan document has multiplied in MoE and sent to the relevant organisations, we decided not to publish additionally the short overview (it is not reasonable). Also the full Action Plan is possible to download from our web-site.

By the last update of Nature Conservation Law were used also our suggestions (especially according the establishment of micro reserves; but also the compensation mechanism for losses

in fish farming, caused by foraging eagles etc). With the completing of new action plan was mainly working the project substantial staff. GSE Action Plan is submitted with IR 2006.

**Lesser Spotted Eagle and Black Stork.** Since autumn 2007 we revised the Action Plans for *Aquila pomarina* and *Ciconia nigra*. There we evaluated the success of previous plans (of *Aquila pomarina* and *Ciconia nigra*) and these plans appeared to be very well implemented. Main reasons for that were implementation of most of actions within EAGLELIFE project and dedicated approach by Eagle Club members. New data on both species according the use of webcams and GPS-transmitters were included to build updated Action Plans and relevant actions elaborated. In the new Action Plans main attention was paid on activities, but biology and overall chapters will fully updated in next plans during 2012-2013. Current versions of both Action Plans are submitted with FR (Annex 16, 17)

**Delaying:** Due the changing of Forestry Law and the political situation and afterwards due unpredicted additional work with land acquisition the finalising of last two Action Plans was delayed. Finally the Nature Conservation Committee of MoE gathered in the beginning of September 2009 and then were approved both Action Plans. As the formal cycling of the Action Plans in Ministry of Environment is still ongoing, we asked MoE a confirmation letter about exact adopting time of these Action Plans (as suggested in Commissions letter from 24/07/2007). There is written by Secretary General that during November 2009 the Action Plans for Black Stork and Lesser Spotted Eagle will be approved by Minister (Annex 2). Nevertheless, the actions described in both plans are proposed in several project applications (after-LIFE actions) and will be implemented during next season(s) anyway.

**Planned progress:** We will send the information about adopting of both Action Plans immediately after relevant Ministers decree is published. And adopted Plans for both species will be available on project web site (now there are last versions of plans and these are submitted with current final report).

**Status:** progressing in very final stadium

## **A 7 Studying of foraging success and the effect of foraging biotope management**

**Objective:** Elaborate appropriate criteria for the assessment of the foraging areas usage. Make relevant analyses about the effect of foraging habitats maintenance. To analyse, what kind of maintenance is better for the target species, what kind of landscape elements should be within the foraging area.

**Started:** in April 2005

**Progress:** We analysed the importance of different foraging habitat types to spotted eagles, and the efficiency of the management, using both - direct observations of foraging eagles and the effect to the breeding success.

2004-2006 we performed the study of foraging areas use by Lesser Spotted Eagles (LSE). The aim was to get the knowledge about the preferred foraging biotope, the preferred prey and success of foraging in different biotopes by breeding LSEs in Estonia, also to evaluate the effect of management of grasslands and to find the differences between foraging areas of successful and unsuccessful pairs. Also we would like to get the basic knowledge for expert suggestions about management of foraging areas within LSE home range. For the study were used 148 territories of LSE.

The **results** of study and following **suggestions**:

- ✓ LSEs prefer to forage on periodically managed grasslands, where success of the prey capture is the highest;

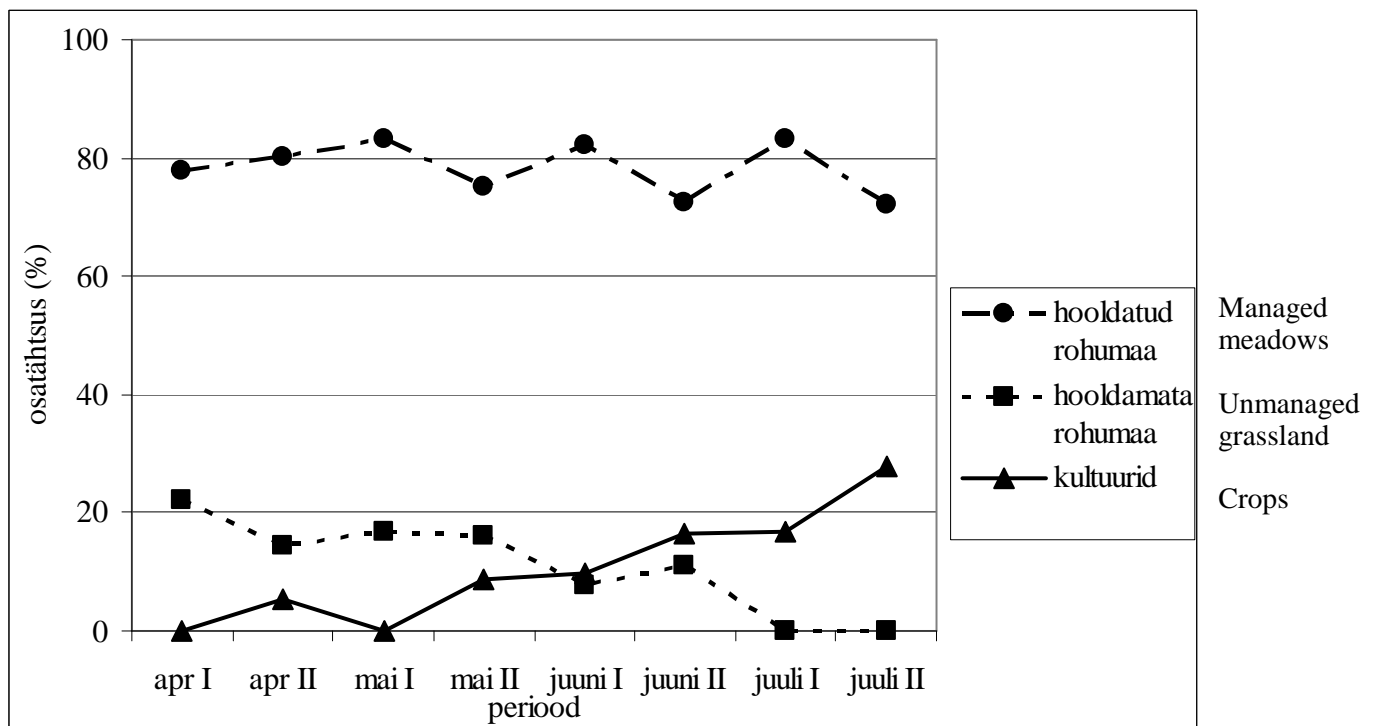
- ✓ During the spring time the fogs are main prey and foraging is more successful on unmanaged open areas, but during summer the rodents are preferred and eagles prefer to forage on managed grasslands and pastures;
- ✓ The managed open areas (crop fields, intensively mowed grasslands etc) ratio to the natural ones should be not more as about equal within the home range (cycle with radius 2km);
- ✓ On semi-natural grasslands no more as once per season should mow the grass, in poor soils (e.g. dry alvars) better to leave unmanaged after every year;
- ✓ There should avoid the rape fields establishment and also wide crop fields on the territory;
- ✓ The retaining of landscape elements increasing the diversity of biotopes should be supported – open areas should contain single trees or tree groups, as well as stone hills etc;

- ✓ Negative factors affect more during the years of poor prey abundance.



We followed (2005-2008) the behaviour of two male, one female and two juvenile **Greater Spotted Eagles** using the GPS-transmitters (three of these obtained within project, other from additional funding). The analyses are based on data gathered from transmitters - the eagles use mowed meadows and fallows more, but unmanaged meadows and arable lands less

often than expected. However, hunting was more active than expected on fallows. Hence, managed meadows are attractive and most frequently used hunting ground. According gathered data (n=549, Figure below) spotted eagles foraged as much as 80% of all time on the managed meadows, other 20% was divided between unmanaged grasslands and arable lands with crops. Arable land using increased during harvesting and unmanaged grasslands use diminished equally. It means that within foraging areas of spotted eagle there is needed diversity of management methods, spited in time and technology. Important is to have all the breeding time some managed fields, also some fallows and pastures.







Several methods supporting spotted eagle foraging are listed in the Guidelines for the Sustainable Agriculture, which is accepted by most Estonian farmer unions, but its fulfilment is not mandatory but only recommended. The implementation of these guidelines should be more efficiently supported by substitutions.

Additionally we got lot of information about migration of Greater Spotted Eagles. The migration routes are visible in website.

More information about foraging biotopes is possible to get via tagging of male spotted eagle, females are quite

few time foraging. But females, if left nest, they fly far and sometimes leave for the days ... From the Eagle Club contribution were bought two transmitters for juvenile Greater Spotted Eagles. One of these eagles got electrocuted two weeks after fledging, but other, named as Tõnn, is one of the most famous eagle in Europe. He migrated through several countries, as winters in Spain and spent his second summer in Finland (where only one pair of GSE is breeding). Data of this eagle are analysed within after-LIFE actions. Also the international co-operation will be continued on that topic.

The **black stork foraging** has been studied as well, as 2005 we equipped two black storks with satellite-transmitters of another project (WWF of Belgium – Flying Over Natura2000) for a year. For EAGLELIFE we used the data gathered at the time when the equipped storks were on their breeding territories. Mostly it was possible only for one male stork (named Tooni), as another (female Jaak) turned early to the migration. On the territory of Tooni we improved the condition of potential foraging grounds (channels, ditches) overgrown with bushes. We proposed the hypothesis that the streams



are not suitable for foraging of black stork if there is no possibility to fly in and out (overgrown with dense bushes). After the cutting of bushes on the 5km of streams Tooni used these streams for foraging. Mostly we noticed the foraging in maintained places in case of dry weather conditions, i.e. managing overgrown streams is particularly important when

feeding resources are limited. During wet periods we found the stork foraging in different biotopes. The data were collected also 2006, as the radio-transmitter still produced the signal. One of our inventory specialists follows the radio (VHF) signals of both storks and mapped the places of foraging. Additionally, we collected the data about foraging of black stork more widely. 2006 and 2007 we equipped another four Black Storks with GPS transmitters and

collected data during 2007. Three tags are working also at breeding season 2008 and additional data is and will be collected. According foraging data up to 2007 autumn (n=394), we analysed them and results are following:

- ✓ Black storks (BS) forage much further from nest as was known before tagging;
- ✓ Almost all streams (except one)) visited by tagged BSs were easy to access by flying bird, i.e. open enough to land there or take off if threats appear. Overgrown with bushes streams are not suitable for BSs. Old trees on stream banks build no problem for to forage there;
- ✓ Cleaning of stream bank will invite storks to forage;
- ✓ Channels and ditches made by forest melioration are used by BS during spring and early summer, but in dry period (summer) artificial streams dry out and then are used natural streams with their diversity;
- ✓ Base ground in used streams is mostly hard (sand, gravel or stony), not muddy;
- ✓ Deepening of natural streams will affect negatively for a long time, as probably the ecosystem will recover during a very long time after digging there



The additional value for using transmitters is a lot of information about migration and wintering, also nest site

selection, relations between neighbours etc. As one of Spotted Eagles transmitter was recovered after the death of bird in Sudan – we had one more possibility to equip Black Stork 2007. State Nature Conservation Centre supported (knowing previous data of the EAGLELIFE project) us with two new GPS-transmitters, so we have good opportunity to enhance Black Stork investigation and improve the conservation measures. Additionally 2008, outside the project, University of Tartu has purchased 10 transmitters for BS to investigate foraging of that listed as indicator for natural forests, species. University of Life Sciences launched three year project about melioration affect on Black Stork population in Estonia, etc.

**Delaying:** it was reasonable to prolong the activity up to 2008. As the transmitters are expensive, we tried to get as much conservational benefit from them as possible. Other related activities were not affected on prolonging of A7, except E3.

**Using of results:** the studying of foraging success and effect of foraging biotope management was one the key actions preparing the data and ground to other activities (A5, A6, E2, E3, E4, E6, E8 and F3). The results built the part of base also for agro-environmental supporting system for land owners (especially within Natura2000 areas and around the spotted eagles nest sites). And following of tagged eagles is very attractive subject for media communication.

**After-LIFE:** There is planned the following and observation of tagged eagles after EAGLELIFE termination. Proposed are more exact data about home range use. All together we obtained 5 transmitters within EAGLELIFE project and from other sources were got another twelve (in co-operation with EIC, SNCC, EB, Tartu University, University of Life Sciences, State Forest Management Centre etc.) up to 2009. These all are used for to get better information for to enhance conservation measures of target species. The Eagle Club will use all obtained tags for nature conservation purposes in after-LIFE projects (as long as the tags are transmitting). If the tags will be recovered, they also will be used for project target species investigation. Difficult is to determine, how long these tags last on birds, but some years for sure (oldest working transmitter is sending data for fourth year by now).

**Status:** implemented



## B 1 Purchase of land

**Objective:** To buy the forested land (min. 65 ha) on most critical nest sites to avoid the damage of them by private owners.

**Started:** in November 2004

**Finished:** in May 2009

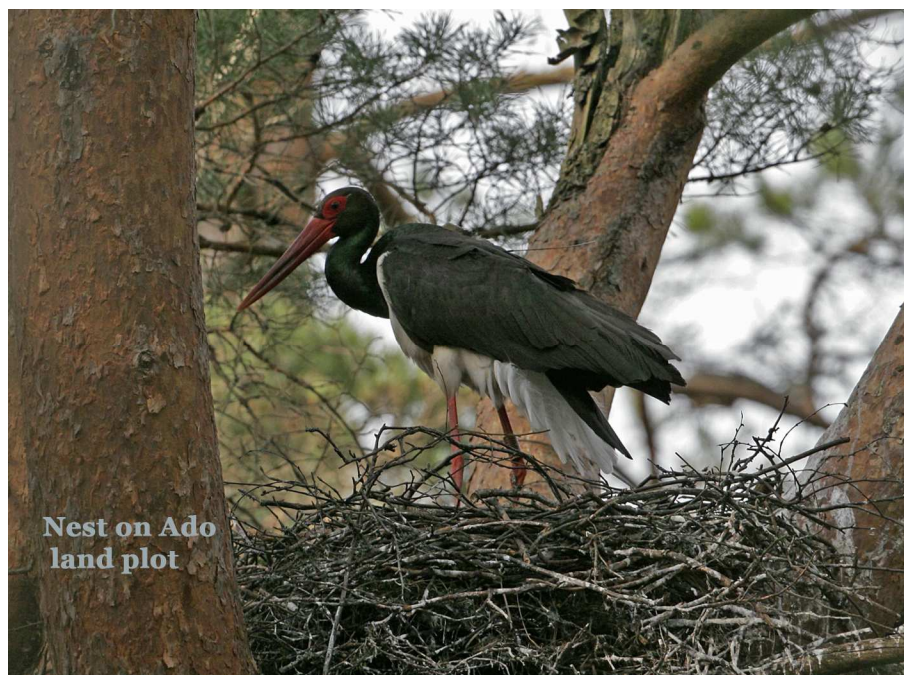
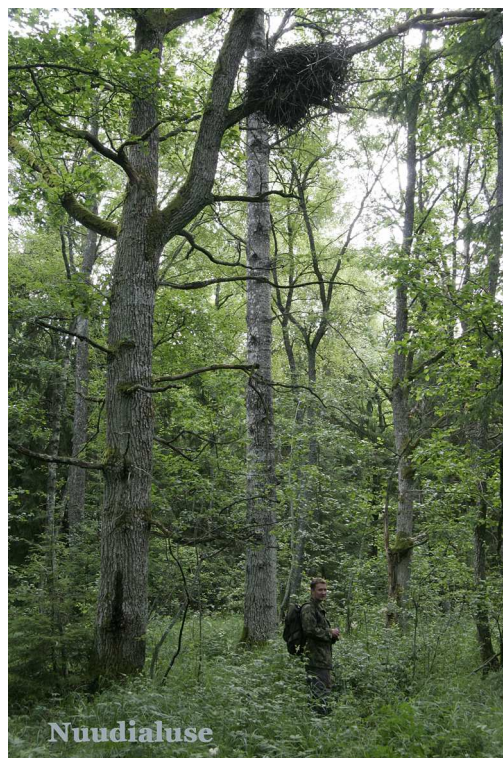
**Progress:** The activity was proposed to be implemented by our partner Ministry of Environment (MoE). Saare plot (Table 5) is a bit different from others, as obtained by using the prior refusal of state and not listed in proposal document. Accept of the EC has been submitted 17.05.06. The purchase possibility appeared, like in that situation common, quickly and the state has legally maximum two months to make a decision about the using of first refusal right. Therefore it is quite difficult to ask in similar situation the Commissions approval in advance. The change of the owner of nest-site usually contains not the positive practice for the nature conservation in Estonia – therefore Saare land plot was purchased so quickly.

Other land plots (Table 5) are acquired according to Third Additional Clause (submitted 6.04.09) by beneficiary, as Ministry of Environment was not able to meet the target of current action.

Average price per hectare of purchased land is in frames approved by EC in project document (2200€).

All the purchased land plots belong to the species protection sites (micro reserves) and belong also to the Natura 2000 network. Species protection sites for 1<sup>st</sup> category species (like *Ciconia*

*nigra*) mean strictly protected area, where all economical activity is prohibited and even entering during breeding season is not allowed without of special permission.





**Table 5 Land acquisition list for EAGLELIFE action B1:**

<i>Land plot</i>	<i>Number by Catastre</i>	<i>Area ha</i>	<i>Natura 2000 status</i>	<i>Habitat types</i>	<i>Date of contract</i>	<i>Price per hectare €</i>	<i>Protection status</i>
Saare	34801:002:0162	9	EE0040465	6,3ha 9010	8.12.2005	704	Micro reserve ( <i>Cic. nigra</i> )
Ado	34801:001:0287	13.9	EE0040466	13,6ha 9080	8.05.2009	2219	Micro reserve ( <i>Cic. nigra</i> )
Metsa	34801:001:0413	9.6	EE0040466	7,1ha 9010	15.05.2009	1591	Micro reserve ( <i>Cic. nigra</i> )
Nuudialuse	34801:001:0116	10.7	EE0040466	6,2ha 9010	8.05.2009	2333	Micro reserve ( <i>Cic. nigra</i> )
Reinukure	30101:002:0342	33.6	EE0040448	23,4ha 9010; 3ha 2190	26.05.2009	1919	Micro reserve ( <i>Cic. nigra</i> )
	<i>Total</i>	<b>76.8</b>			<i>Average</i>	<b>2191</b>	

All purchased land plots (**76,8 hectares all together**) are situated in Western Archipelago, on the biggest Island in Estonia, Saaremaa. Three land plots (Metsa, Nuudialuse, Saare) are situated in the same micro reserve. Maps with all acquired land plots are enclosed (Annex **3**)

Other land plots listed in project proposal or in Second Additional Clause are either swapped to the state, are included to the special order decree about state land acquisition or are damaged naturally (in storms) in a way not suitable anymore for target species as breeding areas. Land purchase around stork nest sites was highlighted also in media:

<http://www.omasaar.ee/index.php?content=artiklid&sub=41&artid=13052>

<http://www.epl.ee/artikkel/467133>



Land acquisition contracts are enclosed to Final Report and clause for the designation to nature conservation in contracts is highlighted (there is mentioned, that purchased land is restricted by law and there is species' protection site (micro reserve) for *Ciconia nigra*, where no economical activity is allowed). In land cadastre the obtained land plots are listed as an immovable whose intended purpose is land of under protection 100%. Saare land plot is





belonging to the state and others belong to the Estonian Ornithological Society (though in contract with co-financier is the clause, that EOS should hand over all land plots to the state, if state is ready to obtain these for nature conservation purposes only).

**Problems occurred:** Many bureaucratic, juridical aspects and political situation not depending on us caused the delaying of land purchase. Additional work for to manage with land acquisition instead of MoE took a lot of energy and time of project staff. There was hired (2007-2008) part-time specialist for to implement that action and to obtain information about land acquisition possibilities and to communicate with land owners. In actual political situation it didn't succeed as well as we proposed. But finally with great help of External Team and Desk Officer the solution was found and target was even exceeded (76,8 ha).

**After-LIFE:** We do not believe of continuity of land acquisition by Estonian Ornithological Society or Eagle Club, but MoE (i.e. state) is obliged to purchase the restricted land plots listed in "order decree". We can't predict the terms or dates of this action, but basically it should happen. There are listed tens of nest sites of target species.

**Status:** implemented



## D.1 Restoration and maintenance of the foraging habitats

**Objective:** To restore 2800 ha flood plains of Soomaa NP, Matsalu NP, Käntu-Kastja SPA, Alam-Pedja NR and Keeri-Karijärve NR improving so the foraging possibilities of target and other important species.

**Started:** in July 2004

**Progress:** The activity is progressing under supervision and support of project partner Environmental Board (formerly State Nature Conservation Centre and Soomaa NP Administration). The relevant partner agreement and statement about change of partner were signed 3 times during a project. The request about the change of partner has been approved by the



Commission in First, Second and Third Additional Clauses.

The official protection rules of Soomaa NP allow starting with the management of flood-plains since 1<sup>st</sup> of July and in other areas since 15<sup>th</sup> of July.

**Table 5**

<b>Restored flood plains within EAGLELIFE project + Agri-environmental works on the same area</b>							
	<b>Year</b>	<b>Soomaa</b>	<b>Matsalu</b>	<b>Alam-Pedja</b>	<b>Keeri-Karijärve</b>	<b>Käntu-Kastja</b>	<b>Total ha</b>
<b>Target area</b>	<b>2004-2009</b>	1990	340	280	125	160	2800
Restored during the project implementation time	<b>2004</b>	351					351
	<b>2005</b>	129					129
	<b>2006</b>	946					946
	<b>2007</b>	473**	164*		74*		711
	<b>2008/2009</b>	72				135	207
Restored after EAGLELIFE termination*	<b>Aug-Oct 2009</b>			295	15		310
	<b>Total</b>	1971	164	295	89	135	<b>2654</b>
Restored with help of Agri-environmental supports, not included to the project*	<b>2007</b>				20	180	200
	<b>Total</b>	1971		295	109	315	<b>2854</b>
Valid contracts for restoring on project area*	2009 (2010?)		296				296
After-LIFE maintenance on project area*	<b>2006</b>	386					<b>386</b>
	<b>2007</b>	763					<b>763</b>
	<b>2008</b>	729	164				<b>893</b>
	<b>2009</b>	836	164		74		<b>1074</b>
Beef-cattle obtained for to maintain restored area*	<b>2007-2009</b>	74				25	<b>99</b>

\* costs of these actions are not included in the EAGLELIFE

\*\* cost of 17,7 ha is not included to EAGLELIFE, but there is used national funding of EB

All together **2654 hectares** of flood plains were restored within EAGLELIFE project (up to composing of Final Report). If to list restoration made with Agri-Environmental schemes – we get restored on EAGLELIFE project area 2854 ha.

**After-LIFE:** Remarkable after-LIFE actions have been implemented and background for future continuation of grassland management in project area is established. Maintenance of restored area will develop in co-operation of Environmental Board and local people. Recurring maintenance has been and would be implemented not within EAGLELIFE, but through Agri-Environmental schemes and with help of national funding through EB. People in Soomaa/EB are working for to elaborate utilization system for organic material (hay, silage, heating, marsh-gas

production etc.) There are with EB oral agreements to make all possible for to enable regular maintenance on EAGLELIFE restoring sites. With additional contribution they confirmed this in reality. It could be that in current economical situation the volume of national funding will decrease, but the wish to support maintenance in our project area seems to be continuous. Below follows the year by year description of action D1.

**2004.** However the season was unusually wet for restoration, the most part of Soomaa co-financing is used during first year and all together 351 hectares of floodplains were maintained. The restoration of open flood plain planned by the autumn and winter was due to the unsuitable weather conditions almost impossible. The continuous overflow of rivers up to end of January and ice after that up to spring were like *force major*.

**2005.** Our contractor maintained in July the previously restored area to save the quality of cut hay. In August the weather conditions turned rainy and the restoration was possible only on drier areas. During the year 2005 we were able to restore additional 129 ha of flood plain. The co-financing rate of EB (Soomaa NP Administration) is filled with two years.

**2006.** According to detail fieldwork in wintertime we must notify that our restoring target area is less than 2800ha in Soomaa NP. During preparation of the project we were able to use only old basic map and haven't possibility for exact fieldworks. Now we made exact fieldworks in the floodplains using new update basic map. The results show us that ca 800 ha is already covered by forest where we cannot see any reasonable idea to restore such kind of areas. In the same time are increased restoring costs (first of all fuel and medium salary). So we asked Commissions permission to decrease restore areas from 2800ha to 1990ha in Soomaa and to add other restoration areas in Matsalu NP, Käntu-Kastja SPA, Alam-Pedja NR, Keeri-Karijärve NR (Approved in Second Add. Clause). The left forested area was of course big part of previously planned restoring area, but the current situation has developed similar. In 2006 we approved three different restoration works (control acts accordingly for 91; 372 and 483 hectares). Last one was paid by EB (that time SNCC). As the conditions for restoring were hard and was evident that with planned budget we could not manage, we searched the additional financial possibilities for to support the restoration in Soomaa NP. In 2006 SNCC Pärnu-Viljandi Region wrote the application to the Environmental Investment Centre (EIC) for to support EAGLELIFE project activity D1. And the proposal was successful – we got additional 123 346 € for restoration. We included this to EB co-financing sum as that was purely used for to meet project target and EIC was not as co-financier during that stage of the project (though during that time VAT was recoverable for SNCC and we were obliged to use sum without of VAT). Reasons for additional national co-financing were higher costs for fuel and employment, also hard conditions on sites (stones, wet muddy areas, etc). As after-LIFE action, in 2006, some 386 ha of previously restored area were maintained (that work was organized by EB (SNCC)).

**2007.** 473 ha were restored in Soomaa through season 2007. As during the visit of Desk Officer and External Team to the Soomaa NP in June 2007 we observed, the conditions for restoration are hard, in some areas even very hard due to big stones in flood plains damaging seriously bush cutting machines. There was decided that not every bush should be cut, but in some areas could be formed mosaic with bigger bushes and the restored area between them. That is even better for spotted eagles, as on bigger bushes they could perch for prey. Also it came evident that one year restoration does not restore in fact all the grasslands, in some more abandoned area there is needed up to five years long restoration. But EB is interested in real restoration and they support also second, third or even fourth restoration round (after LIFE), before the hay making appears possible. But finally the results are really good! During 2006-2007 were organized additional inventories to find and specify suitable flood plains outside Soomaa NP. After-LIFE management was made on 763 hectares in 2007 in Soomaa.

In other project areas we started also restoration during 2007, with additional national co-financing of EB (SNCC), not involved to the project budget. In Keeri-Karijärve Nature Reserve



all together 94 ha were restored (20 ha of this we can't list in project, because there were used Agri-Environmental schemes for restoration). In Matsalu National Park 164 ha of flood-plain was succeed to restore within the project, using additional funding from EB (SNCC), Also in Käntu-Kastja project area were restored about 180 hectares, but as there the land-owner applied first on Agri-Environmental support, we were not able to make our contract and involve these area to EAGLELIFE. For target species there is probably no difference, what schemes are used for restoration, but formally we lost for project 180 ha! Basically is important, that these areas are restored and managed in the future. For after-LIFE management the Agri-Environmental schemes are just fine to use, as there is an obligation to maintain during several years these areas. In Käntu-Kastja about 25 beef-cattle with their offspring are pastured and that gives additional effect.

**2008.** The conditions on flood- plains turned not suitable for restoration works, though in summer time after-LIFE actions (hay making, silage) were made in great numbers - together on 729 ha in Soomaa and 164 ha in Matsalu.

Beef-cattle were brought in co-operation of EB and local farmers to Soomaa, all together 74 adult animals. That builds fine continuation for grasslands management in Soomaa. The sheep are not suitable for Soomaa, as wolves, bears and lynx are quite common in that area. The hay making for local cattle herds turns after-LIFE management more natural. But different developments in heating systems on base of organic material are also welcomed in Soomaa, as the area is really big and produces thousands of tons hay and grass. Many representatives from these projects have been in Soomaa and know about these organic resources.

During second half of year six! times in Soomaa was over flooding and only 72 ha was possible to restore (meeting real difficulties). Similar situation turned out in other project area. To reach with tractors onto Alam-Pedja restoration area, there was build a bridge over the river (cost is included to the EAGLELIFE budget). In Alam-Pedja sub-contractor begun the restoration in late October, but after a day on area – they needed to escape before the over floods. In November Desk Officer of LIFE Unit and External Team visited selected project areas and we were able to move only on boat... During that visit we realized that for to gain target of restoration action we should apply on additional funding for restoration also after termination of the project. For this reason Beneficiary applied on additional funding and we got that. After 31.05.2009 occurred expenses are not eligible in the project, but technically we could gain the action target.



**Keeri-Karijärve 2009**

**2009.** In Soomaa no restoration within EAGLELIFE was made in last project year, but after-LIFE actions were successful, with at least 836 ha (not all data are gathered, yet). The cattle in Soomaa are reproductive and the number of animal is increasing. In Käntu-Kastja eligible and fine restoration was made on 135 ha. In Alam-Pedja 295 ha was restored with good quality (as much as it is possible in these conditions). In Keeri-Karijärve at least 15 ha is

additionally restored, but the work is not finished there up today, after-LIFE actions were made on 74 ha. In Matsalu we have still valid contracts with two sub-contractors, but there was no way to restore in 2009. Sub-contractors tried several times, but high sea level makes entering to the area impossible (only a lot of work to get back). Restored in 2007, 164 ha were maintained

also in 2009 and this area looks quite good already. We will discuss with sub-contractors and EIC, if there is possibility to prolong valid contracts up to next season.



(hand over) acts are the background for the payments to sub-contractors.

**Information sharing:** On the main roads entering to the Soomaa NP and in five more attendance places on flood plains the signs to acknowledge the EU LIFE programme support to restoring the flood plains are erected near all restoration plots. Also some other information on signs is presented about the species living there. In the same way we managed on other project sites. A bigger information board about the project success, target species and main activities is erected in Soomaa Visitors Centre. Poster with similar information is composed and used by need (during different events, conferences, Birdlife meetings, international meetings, etc)

**Status:** implemented (basically)



## E.1 Video-clip about eagles and black stork in Estonia

**Objective:** Action foresees the preparing of an introduction film (about 30 minutes) for schools and departments/officials of nature conservation (100 DVD copies). Illustrative material is needed to facilitate the achieving of other actions targeted to public awareness raising (E2-E6). The film material will be included into popular TV-programs or presented as a separate short film.

**Started:** in April 2004

**Progress:** The producer of videofilm for to implement this activity has been chosen and this is Gaviafilm Ltd (contract between EagleClub and Gaviafilm). Gaviafilm because it is the most experienced nature filming company in Estonia, we have had the experience to work with them also before (at 1997 the film about the black stork, and during last 10 years several TV broadcasts), they have the Ministry permission to film eagles and they already have been working by similar project. The video-film about the eagles in Estonia (52 minutes) was composed by the end of March 2005. The English, French, German and Russian subtitles were made as well. The film was presented in Tallinn 25.05.05 and many interviews were in press about the film. We decided that practical is to add to the DVD also the shorter video about the

eagle monitoring in Estonia (30 minutes) and also the virtual programme (Guide to Eagles of Estonia) for the advanced user (possible to open in PC). In the programme the field identification, nesting, migration, foraging etc has been handled with help lot of illustrative material. The program is possible to use in seminars or in schools also without inviting the eagle specialist. We added to the DVD-set also a small booklet giving information about the using of DVD and introducing shortly the species. The Eagle-Guide programme has been composed by EAGLELIFE staff. The presentation of the DVD 'ABC of Estonian Eagles' took place at 27.-28. March 2006, we organized three different seminars in Tartu and Tallinn. It was widely promoted in media (radio-interviews, newspapers, TV-interviews, online news, journals) without any financial contribution of the project. DVD is also composed like a 'visit card' of Estonia. DVD is added to the report as deliverable. The sum paid by EAGLELIFE for the DVD production composes about 20% of all the cost of DVD (not calculated the cost of producing the added Eagle-Guide program). The other supporters are listed in booklet and film.

**Delaying:** during the preparation of project, we decided to present more aspects in the DVD than was planned initially, that was the main delaying cause. But seems the delaying was substantiated, as the product finally is much more valuable.

**Dissemination:** DVDs have been disseminated among the people, which much help us voluntary; the forest specialists who found many nests of eagles; the SNCC Regions; the schools organizing seminars about the eagles; the people supported our work remarkable; the people organizing seminars about nature conservation; the colleagues outside Estonia we work with, etc. According to the SAP art. 17.2 and 17.3 we confirm that the stipulations about Commission's right to the DVD are respected. The producer of DVD is informed about SAP before the producing of item. Copyrights sharing with Beneficiary is agreed by producer and the amended agreement (as requested in the Commissions letter dated 24/07/2007) is submitted with the Final Report (Annex 9).

**Status:** completed

## **E 2 Booklets "Eagles and Black Stork"**

**Objective:** To share the informative booklets during the seminars and by work with landowners.

**Started:** in March 2005

**Progress and delaying:** In the beginning of 2005 we planned to compose the booklet earlier as proposal foresees. In March we began the gathering of material for the booklet, composed preliminary layout. During the field season the activity was stopped. In autumn 2005 project staff composed the DVD set, including the programme and booklet for the DVD set. We used the gathered information and material there. At the same time, according the information from MoE, that the Nature Conservation Law will soon emended (also our proposal/suggestions have been sent), we decided not to repeat the same information, but to wait for new version of the Law. Also, we ordered more DVD booklets (1500) to distribute these without DVD for free and it was reasonable to postpone the current booklet publication. Although the text, layout and images were ready to use. The DVD booklets were shared in MoE and its county departments, SNCC Regions, schools, among the members of Eagle Club and EOS, etc. The Nature Conservation Law was changed in the end of 2008. Using transmitters, we obtained new data about population size of Black Stork, also using of web cameras widened our knowledge about nesting behaviour, etc. Therefore booklet was published only in January 2009 (English and Russian versions in April 2009). From other side, during this delay we got many new and better images of our target species... There were printed 8000 ex. of Estonian version, 1500 English and 500 Russian booklets.

**Dissemination:** The booklets are shared to land owners, together the extra pages. Also all the project partners are sharing the booklets through their communication systems. Dissemination has occurred during the seminars during the project and also is continued after project



termination. Russian versions are shared to Russian schools and in North-East Estonia, where the most of Russian people live. Also both Museums of Natural History ordered booklets of different languages. English versions are shared mainly during the international meetings (like world Raptor Conference held in Scotland in the end of Sept 2009, etc), also are sent directly to interested people around the world (like most active webcam watchers and commentators). We are satisfied with the final result of activity, as the booklet is suitable to use like visit card by Eagle Club members and also by EAGLELIFE Partners (they already use this in that way). Copies of booklets are submitted with Final Report (Annex 13).

**Status:** implemented

### **E 3 Extra pages for landowners**

**Objective:** compose 350 extra pages according to the developed guidelines and delivered to the private landowners. In order to facilitate the Ministry of the Environment in preserving the species habitats/nesting sites in private lands.

**Started:** the composing of extra pages we started in December 2006

**Progress:** first we composed and sent the information letters (booklets) to land owners according all EAGLELIFE target species, all together 386 land properties with 392 land owners (some properties have many owners and some owners have many land plots). This paper informed the land owner about establishment of micro reserves around the nest sites and we ask several questions about the communication possibilities, also owners' opinion, additional information etc. The samples of booklets were submitted with TR 2007. According the letters there were lot of questions and also suggestions about protecting regime, micro-reserve borders etc.

Additionally the target group informed us about eight new nests on their or neighbouring lands.

Afterwards also were composed the same according other eagle species (not within current project) – both groups together contain 822 different land properties. Many of land owners we also visited during that activity and if appeared the good reason we presented the specially designed thermo-jug or hat to them, after they informed about new nest for instance. New forms of extra



pages about maintenance suggestions around target species micro reserves (mainly for foraging areas) were prepared and parcels added with booklet of E2. This action was made in February 2009, just after publishing of booklet "Eagles and Black Stork in Estonia". All together we sent in February-March 2009 over 800 parcels with these materials, but this is only about 1/3 of all target group...

**Delaying:** was caused by prolonging of A3, A7, which activities produced the background for current activity. But this delaying let produce the better result. The target group increased during work with land owners' database, but the staff who composed these letters, remained the same. So it needed more time.

**After-LIFE:** there is planned sending of next set of extra pages and booklet to land owners after project manager will finish work with EAGLELIFE final report (probably in January-February 2010). This set of informative materials covers about 1600 land owners and then we can think about new cycle, probably in some other way prepared material to land owners...

**Status:** finished in terms of EAGLELIFE. But will be continued, as sociological study showed clear interest of land owners to get more direct information about "their" eagle or stork.



## E 4 Regional seminars and learning days

**Objective:** To turn forest owners and general public attitude toward conservation of our target species into more friendly. To increase the knowledge level of target groups, because the people usually want to protect only the objects well known for them.



**Progress:** The preparation of presentations for different target groups was begun in September 2004 and action was finished in last day of the project.

Presentation has been carried out in such kind of way that the auditorium had the possibility to discuss the relevant issues, find solutions to some problems etc. The presentation aim was to improve participants' attitude to nature conservation

through eagle's example. The different presentation for children has been prepared. The participants were registered as rule and registration lists are archived. 2004 and up to June 2005 by the end of seminar also the feed-back list was used and most of participants filled it. Afterwards we stopped it, because no new ideas were got anymore. Also we enhanced the seminar programme using previous notes of feedback. Altogether 84



local seminars with over 3550 participants were implemented during the EAGLELIFE project. The short notes about every seminar are written in table (Annex 10). To note that during project time the staff of EAGLELIFE took part in several seminars, not directly linked to the project (not expenses, working time or equipment of project was used), but fully organised by other organisations.

If possible, in the beginning of seminars the newsreel from year 1935 (about Estonian Eagles) has been shown, for to take the attention. Since 2006 for the introduction of eagles was used the programme composed under action E1 - Guide to Eagles of Estonia, stored on DVD 'ABC of Estonian Eagles'. In some schools the DVD was left. Also was used a DVD programme 'Birds of Western Palaearctic', during several seminars, if there appeared questions about identification of different bird species or the topic was wider as eagles or black stork. The images about target bird species taken within the EAGLELIFE were used in great numbers. The booklets prepared for DVD set, were disseminated separately in years 2006-2007 during the seminars and since February 2009 the booklets 'Eagles and Black Stork in Estonia'.

Digital images about seminars have been taken and stored if possible. If the seminar was presented only by one person, there were usually no possibilities to take photos same time. In last year we used the possibility, that some participant took images during the seminar – that caused some excitement among participants, especially in the school. In some of seminars the journalists were participating and wrote about in media (e.g. <http://www.tartupostimees.ee/?id=86502>).



Near the end of project, there was organized a final field seminar on barge (like they were used during hundreds of years in Estonia) floating along Emajõgi River (through Nature Conservation area, where three eagle species were observed) and sailing on Peipsi Lake. There participated different people from the organisations in what we met most active interest during previous seminars (students and teachers from certain schools, nature conservation inspectors and

officers, people from Tartu University, EENet and Environmental Education Centre, etc., 30 all together, plus barge staff). The results of the project and situation with target species was discussed, also some after LIFE aspects were introduced.

**Manager's opinion:** Seminars and learning days were very useful and interest for seminars (especially in schools) was higher as we were able to organize. Direct contacts are very necessary to work successfully with public.

**After-LIFE:** The activity is continued after EAGLELIFE termination and several presentations are ordered for the future. Activity is foreseen in all action plans of target species.

**Status:** finished

## E 5 Web site updating

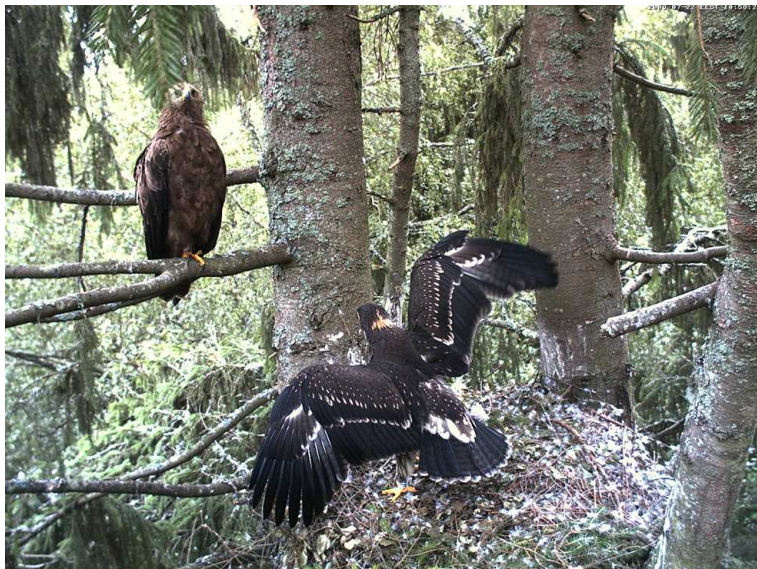
**Objective:** Information on the project with its actions and results is widely available, environmental awareness will be promoted. The contact information is available.

**Progress:** The information about the eagles and black stork is updated. The full information is presented in Estonian version, but the most aspects are translated into English and Russian. The address of the web site [www.kotkas.ee](http://www.kotkas.ee) Most interesting could be following the migration routes of tagged eagles and black stork.

Within that action we installed in March 2007 web camera to black stork nest. Afterwards whole breeding season was possible to observe the nest, up to leaving for migration. As we equipped adult male in that nest with transmitter, we had possibility to follow him also after nesting period (unfortunately that stork was shot down in Lebanon-Israel border area during migration).







By the proposal the web-camera should be set up near the spotted eagle nest. We worked on that topic and in the beginning of April 2008 we found possibility to install webcam also on lesser spotted eagle nest. Eagles arrived, begun to refresh the nest. But the eggs were not laid in this nest. Seems they made break, as last three years every year there was chick in nest. Black stork webcam we enhanced in 2008 (solar batteries, automatic messaging about power in batteries, new camera with better resolution, broader upload possibilities etc) and

also inhabitants of the nest showed us very interesting life on nest... Our web cameras are very popular in Estonia and also outside, for example during three years our cameras streams were opened 8,3M times from at least 143 countries. Link in English was to the stork web cam at 2009: <http://www.looduskalender.ee/en/node/3231> , some videos of season: <http://www.looduskalender.ee/en/node/3283>

Spotted eagle camera 2009: <http://www.looduskalender.ee/en/node/3466> , some videos of the breeding season are available: <http://www.looduskalender.ee/en/node/3465>

After nesting period the camera systems were uninstalled and stored for next season. As looduskalender.ee is fully voluntary and dynamic environment, there is difficult to find history pages, but actual events or situation in nature is well presented for a month.

There are Estonian, English, German and Russian versions as well. English translation of articles about EAGLELIFE and its target species we ordered from professional translator, as German translation was made according English version voluntarily.

There are also in LIFE News in July 2007 and June 2008 articles about our black stork webcam. In EAGLELIFE website (main page) there is possible to watch (with quite low resolution) the film produced according activity E1.

Under this action (and partly covering also other actions) is purchased second digital camera in the project. Camera we purchased for better continuation of activities initiated with EAGELIFE project, as new camera enables to save high quality HD video and also high quality photos. For different actions this is essential tool – like colour ring reading, individual recognizing of breeding birds without of rings, investigating of hybridisation through visible differences in plumage, saving the facts about violations if found, using camera with remote control (in places, where access is difficult), etc. Also it is necessary for to obtain attractive material to use in seminars, websites (like <http://www.looduskalender.ee/en/node/5259>) and media (for last one the journalists ask very often some image of species they write about).

**After-LIFE:** website is one overall priority for Eagle Club, where to publish their information. Web site enhancing is also one of actions foreseen in new Action plan of target species. Also we continue the development of webcam project, as technical possibilities develop also very quickly and we try to be with best quality remote cameras on web. The using of new camera is described already above. After project that activity will widened to other eagle species too.

**Status:** implemented

## **E 6 Introduction of eagles and black stork in media (radio, TV, papers)**

**Objective:** Introducing the species of conservation concern to the public through television, radio and internet, and through articles in journals and newspapers, is an important task of conservation in order to explain the protection schemes and their importance in a popular form.

**Progress:** There is lot of media outputs established. During the project at least (not all are stored in archive) 115 articles in paper or online press; 36 radio interviews and 16 TV broadcasts have been initiated. Most of them are connected with webcam or tagged black storks and spotted eagles. It means the virtual following of the (rare) birds is interesting for public and is also good opportunity to raise the knowledge about protected species. List about articles in media (what we found easily) is in Annex 11.

Additionally to the media list, over 100 times were the project target species handled in a special nature news site (looduskalender.ee), for example in the eagles migration chapter:

<http://www.looduskalender.ee/en/node/2650>

From eagle nest cam installed 2009, throughout of all breeding season the online clips were shown in most popular Estonian TV channel (Kanal2), all together for 215 times per 10sec.

There are few people in Estonia, who do not know these eagles and their offspring.

During 2007 and 2008 black stork webcam diary was wrote in looduskalender.ee by project staff, almost every day. Also media from outside Estonia made some interviews.

Initiated from the media communication, many of new nests in forest we were informed about.

There are some journalists, asking regularly about the interesting news in EAGLELIFE. And one of our biggest newspapers financed our expedition to recover a transmitter of Spotted Eagle from Sudan... Afterwards we had possibility to use it again, today its carried by black stork for three years (see image about Ado land plot in D1 description). Writing about tagged black stork family has been attractive for media.

**After-LIFE:** In general the media work will not change after project termination, as we think it has been successful until now and will continue successfully. Experience about communication with media during EAGLELIFE gives good opportunity to go on.

**Status:** implemented

## **E 8 Creation of international co-operation network at European level**

**Objective:** The conservation management should have both national and international components in order to fulfil the requirements of national environmental strategy and EU Action Plan for the species.

**Started:** Official beginning of the action by the project proposal was at April 2005. But the practical situation supported the equipping of Eagle Center before in January 2005, to establish the workplaces to the hired EAGLELIFE staff.

**Progress:** For the establishment of Eagle Centre the room in office of EOS was separated. The room was equipped for two person to work in. Necessary furniture, desktop computers and colour laser printer were purchased, internet connection established. Photocopying machine we purchased like Overhead expence, as the bill payd by EAGLELIFE project composes 40% of all the cost. Another part of cost has been covered from EOS overall budget. And the machine has used also about in same division of labour. The office was needed also for to place the archive materials about the eagles of EagleClub. It is needed for to work out the database of nestsites and also for to work with land owners.

In the beginning of 2005 we started the international co-operation project with three Baltic States and Byelorussia. It was for the dissemination of previous experience and to find before the field season the common interests. Therefore was organized by EAGLELIFE staff the meeting 3B+B in Teici Nature Reserve, Latvia. Target species were same as in our project (both spotted eagles

and black stork). First day was dedicated to spotted eagles and second one to the black stork. Representatives from all countries presented the conservation and research situation within those species. After the discussion the common interests and problems were written down in table form, where also the possible solutions has been came up (elaborated document was submitted with IR 2006). All together in 3B+B meeting 15 persons were taking part. The meeting has resulted to increased international co-work in research and conservation of eagles.

For instance, according to the conclusions of the meeting in Teici, the Byelorussian, Latvian and



Lithuanian colleagues began to collect and share the samples for genetical analysis of spotted eagles (the moulted feathers and blood samples), which are used in the study of the hybridisation rate and viability of the populations. Secondly, the participants purpose to harmonize the collected data formats to

compare the results from different populations more efficiently. The 3B+B co-operation has continued and 2007 March the new meeting has organized in Teici Nature Reserve, Latvia, where all work during last two years was checked and further plans elaborated. It was quite surprising, that all the involved countries are organizing the similar to our Eagle Club organisations and almost plans from last meeting are in work, mostly even executed. Some smaller meetings were organized between Estonian and Latvian colleagues, for example to install webcam on the spotted eagle nest in Latvia. 2007 was made exact plan and 2008 we helped to erect webcam system. Now it is possible to watch growing of lesser spotted eagle chick through camera. Hence in latvia is not so easy with Internet connections in remote areas, but hopefully that will develop soon. The link to Latvian eagle camera is following:

[www.pomarina.lv](http://www.pomarina.lv) , but this is not financially connected with our project.

In addition to the intensive mailing with many colleagues from different countries, our staff (4 persons) took part in conference on spotted eagles in Biebrza, Poland in the middle of September 2005. Two presentations were given, one about the scientific and conservation aspects of the hybridisation, and the another about the situation of Greater Spotted Eagle in Estonia. Within three days many contacts with colleagues from different countries were created (including the team of Slovakian Imperial Eagle LIFE-project). 2006 the spotted eagles colour ringing programme is initiated. First year Estonia and Slovakia took part in that, but since 2007 also Latvia, Lithuania, Belorussia, Russia and Poland are involved. EAGLELIFE project is essential for that co-ooperation, as some travel to colleagues was necessary and we as coordinators of colour ringing programme ordered and bought also the rings for to begin the programme. We should also mention the dense information exchange and co-operation with Latvian colleagues, and the communication with black stork specialists over Europe due the participating in Flying Over Natura 2000 project. The trapping of black stork and equipping with transmitters we went to study and practically test into Latvia in the end of June 2005, where Czech colleagues shared their experience and even equipment (image on next page), which was successfully used afterwards in Estonia.

To this activity we could list also participating in different meetings concerning the LIFE projects, their composing, implementation, co-operation; the EU Directives; the visit to the Latvian Kemeru LIFE project; LIFE meetings organized within Häädemeeste project, also



consultations with Danish frog specialist Lars Briggs etc. During almost the meetings we have introduced EAGLELIFE project or some aspects of this. Most of the communication has been project managers or scientific inventory specialists work up today. We should mention that during the EAGLELIFE project our team has changed from the information and knowledge users



to the information producers – most of specialists working with satellite transmitters on eagles or storks have asked the advice (Lubomir Peske; Pertti Saurola; Finnish Crane Team; Belgian, Latvian, Polish, French, German etc colleagues).

2007 October two members from EAGLELIFE staff visited one the most important wintering and stopover place for Eastern European black storks – Jordan River Valley, Israel (as outside EU we asked and got approval from Desk Officer, by e-mail 14.09.2007). There were made good contacts with local nature conservation people and 45 different rings of black stork were

read. These data helped fasten contacts with all origin countries (8) of ringed birds (45). Long communication has been made according ringed birds and made some common plans for future. Quite good images were shared with colleagues from different countries. Also we have now good overview about this stopover site, about



threats there, where a remarkable part of Estonian (and other) black storks are stopping or wintering. Following our success in Israel, German colleagues repeated the same work in 2008 and 2009.

At the beginning of April 2008 was organized 5<sup>th</sup> International Conference on the Black Stork (*Ciconia nigra*) in Danube Delta Cormoran Centre, Romania.

Conference web site: <http://www.indd.tim.ro/blackstork/> That was made in close cooperation with Romanian Danube Delta National Institute and Hungarian Birdlife Partner MME (Hungarian Ornithological and Nature Protection Society). 28 participants of 12 European countries took part. Presentations about status, research and conservation were presented. Romania was chosen because to initiate more attention on that species in this country, where nesting and migrating through in big numbers occurs. New aspects about black stork investigation were discussed with colleagues from different countries.

Next conference was planned to organize in Turkey probably in 2011 (ie after EAGLELIFE), as Turkey is situated on migration route of almost of European black storks.

Additionally also the national work with eagles has enhanced with help of EAGLELIFE project - should mention the importance of different equipment (not possible to obtain within national funding), knowledge and studies. We decided not to use proposed before the name Eagle Centre, as Eagle Club is quite well known in Estonia and no real need to change that to the Centre.

Hopefully it will not contain the problems in project evaluation – Eagle Club is working and will work in Eagle Centre, situated in rooms of Estonian Ornithological Society!

The coordinating of the colour ringing scheme will get good possibility to expand the thematic of co-operation in different conservation actions. One plan is also to compose the genetical database for both Greater and Lesser Spotted eagle. Some work for that is made; example concluded the contacts with Siberian specialist of birds of prey. It is important to collect material of pure Greater Spotted Eagle from Siberia where this species breeds without sharing the range with the Lesser Spotted eagle. Of course, all these plans (especially outside the Europe) are not the work of EAGLELIFE project, but we should look already forward. The potential knowledge of our team about the hybridisation seems to be on the top and it should be used. Participating in different conferences and meetings is planned also after project termination. National activities of Eagle Club are developed according revised action plans.

**After-LIFE:** Eagle Centre, equipped and renovated during the project is used by Eagle Club after project termination and will be used also in the future. There are two working places for specialists and necessary equipment for produce individual booklets for land owners, to build maps (MapInfo software is purchased within the project) about micro reserves, about field work planning and for studies where we will use data from transmitters, for example. The data from transmitters will be gathered within Eagle Centre (and paid accordingly by Eagle Club). All the purchased furniture and other equipment will be in Eagle Centre. But also Estonian Ornithological Society will use the Eagle Centre possibilities for bird conservation, international co-operation and awareness raising purposes. The knowledge and contacts will be used also for to enhance conservation of other eagle species, like there is confirmed meeting about Osprey specialists of Baltic States in winter 2010.

**Status:** implemented

## F 1 Project management

**Objective:** In order to fulfil the project objectives and get best results for the value of the time and finance.

**Progress:** everyday work, during the reporting period even more...



**Beneficiary:** The project manager was nominated in the beginning of the project. The tasks for the manager are to keep the time planning and detailed action plan up to date; to find necessary staff for the implementation of project; to check the staff work, tasks and results; to represent the EAGLELIFE project in several meetings, seminars etc.; to work out the necessary agreements, contracts, procurements etc.; to work with partners; to be the contact person of beneficiary for different purposes. Besides, the manager tried to be in touch with field work as much as possible after the managing. Current final is the fifth report of EAGLELIFE project.

During the reporting period of EAGLELIFE, the manager has been participating in at least 29 meetings, conferences and seminars, where the introduction or some kind of activity of the project has been presented. Project assistant has participating in 10 similar seminars; in four of them we both took part. Visited seminars were the every year LIFE and LIFE+ introduction seminars (4), BEF LIFE Co-op and biotopes (boreal forest, wetlands) management seminars (4), Slovak Imperial Eagle LIFE project; Latvian Kemeru LIFE project (2), BEF EU Directives concerned seminars (3), the Häädemeeste LIFE seminars (3), Rāpina LIFE seminars (2), LIFE02NAT/EE/8555 seminar and meetings in MoE and in its departments, in SNCC/EB, in NGOs, in State Forest Management Centre, new LIFE+ projects, 'Learning from LIFE' seminar etc. We took part in BEF LIFE Co-op project and by preparing of project in publication "Experience of the Baltic LIFE – Nature projects: planning, implementation and continuation", available at: <http://www.bef.lv/247/>

Also the keeping of database about the nest sites, the adding of new ones in database, the preparing of materials about new nests for to register these in state environmental register, the communication with land owners, corresponding persons and communication with MoE and its departments in counties, also with SNCC/EB has been partly the managers tasks. For correct work with maps (proposals for micro reserves, land owners' letters, transmitters data analyses, planning of field work, etc) was purchased MapInfo software, according Commissions approval (24/07/2007). We affirm that purchased software will be used only for nature conservation purposes in the future. Actually it is absolutely necessary for successful work already...

The awareness specialist has organized the seminars, prepared the presentations and sometimes present these themselves. Also the some media work has made by them, composed the press releases, they have taken part also in international co-operation work and looking about the accountancy etc. If necessary, all the staff is working on the field (except accountant). Scientific inventory expert checked (during his working time up to March 2007) all the inventory analysis and reports of other inventory specialists and makes the conclusions. Also he was responsible about the hybridization tasks and has organized for example the 3B+B meetings. Inventory specialists hired for field season to work with concrete aspects (e.g. foraging success observations, nesting success check, mapping the territories etc.).

Monitoring expert elaborated the monitoring scheme, gathering the needed data, works out the questionnaires, organize relevant field work etc. If necessary the specialists take part in seminars or other events. Additionally (temporally for half year in 2006) hired restoration and working with land owners specialist helped a lot in success of restoration work and in communication with land owners. Probably not so much as expected it





was successful of information exchange specialists work with land acquisition target group and stake holders.

In the beginning of every month the project staff meeting about the last and next month work has been organized, where the next tasks are given and the implementation of last ones has been checked. Additionally, manager's tasks include the reporting and checking of accountancy. During 2007 and beginning of 2008 managers main task was preparing of modification request. And 2009 working on land acquisition and modification request were like additional to the everyday management. As the project was prolonged for a year, the last year we did not hire enough specialists, but main work has been done.

**Partners:** Soomaa NP has organized all the flood plain restoration and the relevant documentation according the contracts with land owners about the restoration work and about permissions of land owners to allow restoring on their land. Also the state support acquiring and dividing among the contractors has made during 2004-2005 by Soomaa NP administration. Since 2006 the Soomaa NP administration has changed to SNCC. All the obligations of Soomaa NP have passed over to SNCC Pärnu-Viljandi Region. Already in 2005 Soomaa began maintain of restored areas and it will continued by SNCC. The finances for that are allocated by MoE or Agricultural Supports to the Region. SNCC has organized additional co-financing of restoration work in Soomaa flood-plains (December 2006-January 2007). Since 2008, according modification SNCC Pärnu-Viljandi Region is changed to SNCC, as the project sites were not only in Pärnu-Viljandi Region. In 2008 November SNCC has been reorganized again, and was established Environmental Board, what included also county departments of MoE. EB and its predecessors were very efficient and functional with EAGLELIFE (in practical and in financial meaning).

Ministry of Environment was responsible for the land acquisition. MoE acquired Saare land plot has purchased. MoE is worked and is working on updating of regulation about species protection sites for eagles and black storks. But MoE was not able to acquire the land as stipulated in project document and partner agreement. Fortunately Minister and Ministry helped in getting contract with co-financier about land acquisition to the Beneficiary

Eagle Club financed most of work at the beginning of the project and therefore the staff and sub-contractors of Eagle Club worked afterwards for the EAGLELIFE project. Eagle Club support has been remarkable by media work and web site. Eagle Club will fill in the future the proposed Eagle Centre place. Also is Eagle Club the main body to implement after-LIFE projects directly connected with target species and with their conservation.

Private Forest Association has involved to the project activities, especially the communication with land owners and preparing the extra pages composed to the land owners. Also they help to disseminate materials to most reasonable target group.

**Status:** finished

### **F 3 Monitoring the results of the project**

**Objective:** To develop and use suitable evaluation indicators for the fulfilment of the project objectives – ensure the favourable conservation status of three important bird species of European Union conservation concern.

**Started:** January 2005

**Progress:** First the part-timely working monitoring expert was hired. The first task of the expert was the elaborating of monitoring scheme. That is made and contains shortly following:

The main threats and the actions against these:

- ✓ The lack and loss of nest sites - A3, A5, A6, B1
- ✓ Disturbing during the nesting – A4, E1-E8
- ✓ Degradation of foraging areas – A7, D1

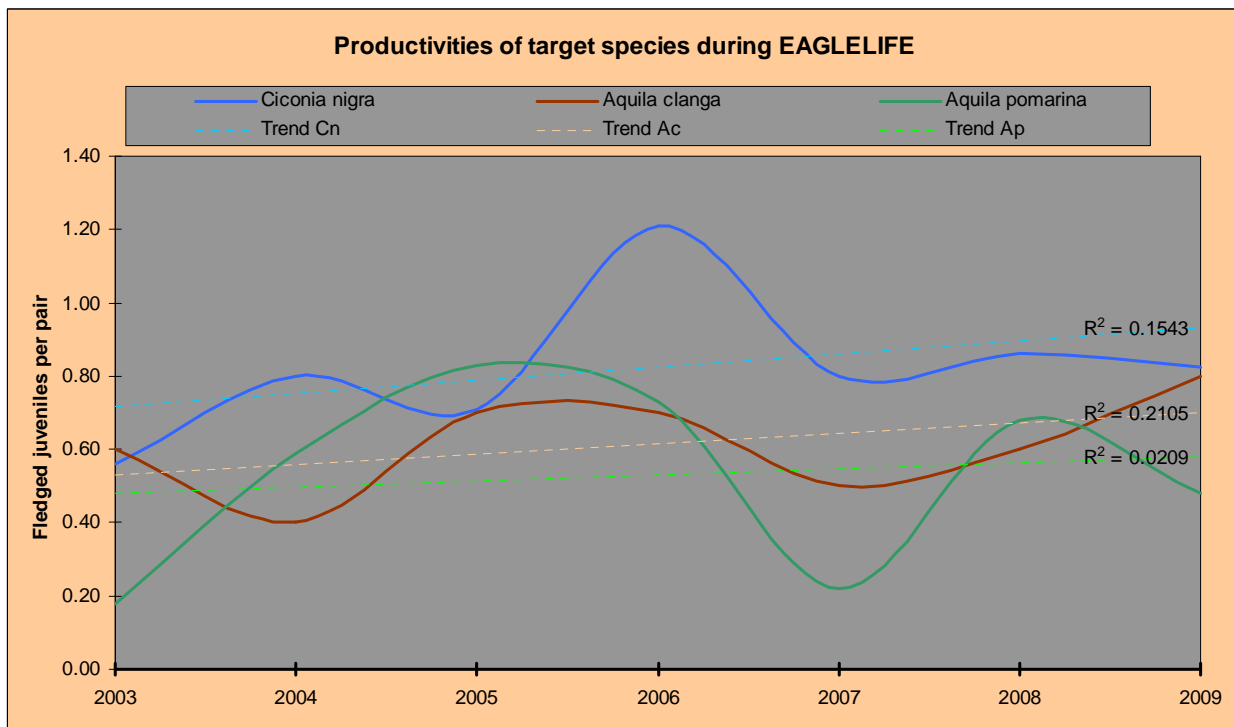
As it is very difficult to evaluate the efficiency of separate actions one by one, evaluation will be made according to the measurable values depending upon at least one threat has diminished (or ascended). The trends of the numbers and productivity of populations at the beginning and at the end of the project seem to be the best possible indicators. Project is successful when the trends of the productivity and numbers are at least stable.

**Productivity** (number of offspring per occupied nest) is the best indicator for the breeding success of large bird species. Unfortunately, there are some potential threats for this indicator: the factors causing annual fluctuations of productivity (e.g. vole-cycles) complicate the use of this parameter, and, secondly, the effect may appear not during the project but after.

- ✓ The year 2004 was characterised by average productivity of *A. pomarina* (0.6), and by low productivity of *A. clanga* (0.4) and *C. nigra* (0.8).
- ✓ In the year 2005 abundance of rodents was in maximum and this led to the high productivity in *A. pomarina* (0.8) and *A. clanga* (incl. mixed pairs; 0.7). The productivity of the *C. nigra* was relatively low for the species (0.7).
- ✓ In the year 2006 abundance of rodents was low but productivity of *A. pomarina* (0.7) and *A. clanga* (incl. mixed pairs; 0.7) was relatively high. The productivity of the *C. nigra* was better than last years (1.2).
- ✓ In the year 2007 abundance of rodents was in minimum and productivity of *A. pomarina* very low (0.22; trend slightly ascendant) and *A. clanga* (incl. mixed pairs; 0.5; but very few samples) also had minimal values. The productivity of the *C. nigra* was low (0.8).
- ✓ In the year 2008 abundance of rodents was growing during the breeding season and productivity of *A. pomarina* appeared to be higher as predicted (0.68; trend slightly ascendant) and *A. clanga* (incl. mixed pairs; 0.6; n=9) also had minimal values. The productivity of the *C. nigra* was low (0.9).
- ✓ In the year 2009 (according after-LIFE actions!) abundance of rodents dropped down during summer in most of Estonia (only in western part of Estonia it reminds high) and productivity of *A. pomarina* was therefore a bit less as medium (0.48; trend still slightly ascendant) and *A. clanga* (incl. mixed pairs; 0.8; n=9). The productivity of the *C. nigra* was very low again (0.8; for last three years already the same...).

The trend since 1991 for productivity is slightly positive for *A. pomarina* ( $r^2 = 0.13$ ) and negative for *C. nigra* ( $r^2 = 0.07$ ). For *A. clanga* (incl. mixed pairs) we have more-less sufficient data (from more than 5 nests annually) only from last ten years, and the trend for this period is positive ( $r^2 = 0.12$ ).

Using all monitoring data of EAGLELIFE project period (+ preparation year 2003), all trends of productivity are a little more positive as general, especially for *Ciconia nigra*.



So, supporting on productivity data analysis described above – EAGLELIFE project has been successful, especially concerning black stork. We can't say, if these results are really directly linked to project activities, but also is difficult to affirm contrariwise. These analyses are difficult to make, because of cyclic values for spotted eagles, caused by rodents' abundance fluctuating. According black stork productivity values we can more surely affirm positive impact of EAGLELIFE.

**Population numbers.** The numbers of the *A. pomarina* have been followed on special study plots, whereas in *A. clanga* and *C. nigra* all breeding territories occupied on last three years are considered. Population numbers are re-estimated after every 3 years. We should mention that numbers may be also affected by several natural factors, especially on edge of range (like Estonia is for all those species).

- In 2002, 100-115 pairs of *C. nigra*, 500-600 pairs of *A. pomarina* and 20-30 pairs of *A. clanga* (incl. mixed pairs) were breeding in Estonia.
- In 2005, the estimations for numbers have not been changed.
- In 2008, estimation of *C. nigra* is a bit difficult, as obtained by satellite telemetry data show mistakes in our previous methodology of estimation. Data are therefore not fully comparable with previous ones. If to use same methodology as during previous years, 110-120 pairs of *C. nigra* (real figure is about 80 pairs), 500-600 pairs of *A. pomarina* and 15-20 pairs of *A. clanga* (incl. mixed pairs) were breeding in Estonia. Diminishing of *A. clanga* is caused by hybridisation and by “disappearing” of males (therefore females mate with male *A. pomarina*). The overall numbers for *A. clanga* are small for statistics and not always it is possible to determine, what species is actually breeding in certain nest (in case of unsuccessful breeding).

In summary we can write that population numbers for Lesser Spotted Eagle (*Aquila pomarina*) are stable, population of Greater Spotted Eagle (*Aquila clanga*) has diminished and population of Black Stork (*Ciconia nigra*) has slightly increased.

**The protection of species.** The project is successful when the number of protected nest sites in the national register, and the area of protected habitat type are increasing in Estonia.

- **In 2004**, 38 nest sites of *A. pomarina*, 1 nest of *A. clanga* and 5 nests of *C. nigra* were found and added to the register. By the end of 2004, the register contained nest sites of 290\* *A. pomarina*, 19\* *A. clanga*, 6\* *A. clanga* x *A. pomarina* and 135\* *C. nigra* nests. In the end of 2004, the total area covered by minimum protection zones for nest sites of three species was **3887** hectares (877 for *A. pomarina*, 477 for *A. clanga* (incl. mixed pairs) and 2533 for *C. nigra*. Many of these nest sites are situated in larger nature reserves, hence, they are protected in larger area.
- **In 2005**, 48 nests of *A. pomarina*, 2 of *A. clanga*, 12 of *C. nigra* were found and added to the register. In the end of 2005, the register contained nest sites of 309\* *A. pomarina*, 19\* *A. clanga*, 5\* *A. clanga* X *A. pomarina* and 137\* *C. nigra* nests.
- **In 2006**, 43 nest sites of *A. pomarina*, 3 nests of *A. clanga* (incl. mixed pairs) and 8 nest sites of *C. nigra* were found and added to the register. In the end of 2006 the register contained 344\* *A. pomarina*, 20\* *A. clanga*, 5\* *A. clanga* x *A. pomarina* and 136\* *C. nigra* nest sites. The total area is **5560** hectares of protected micro reserves for *A. clanga* and *C. nigra* which was accepted by MoE in 3<sup>rd</sup> of July 2006.
- **In 2007**, 31 nest sites of *A. pomarina*, 0 nests of *A. clanga* (incl. mixed pairs) and 11 nest sites of *C. nigra* were found and added to the register. Register data by the end of 2007 is not available, though we ordered these from register. Preparation of *A. pomarina* micro reserves is still not finished, but it depends on MoE, not on project staff anymore. The additional three *C. nigra* nest sites were proposed to add to special regulation update.
- **In 2008**, 25 nest sites of *A. pomarina*, 1 nest of mixed pair (*A. clanga* X *pomarina*) and 8 nest sites of *C. nigra* were found and added to the register. In the end of 2008 the register contained 369\* *A. pomarina*, 21\* *A. clanga*, 4\* *A. clanga* x *A. pomarina* and 161\* *C. nigra* nest sites. The total area is **5621** hectares of protected micro reserves for *A. clanga* and *C. nigra*. Micro reserves for *A. pomarina* (184 nest sites, situated outside of protected areas, all together **1383ha**) are prepared by project staff for MoE, but these are not accepted by the end of the project (though by legislation after submitting of proposal, the economical activity on those areas is stopped).

\* data from national register "EELIS (Eesti Looduse Infosüsteem - Keskkonnaregister): KeM Info- ja Tehnokeskus"

The numbers of yearly found new nests and increase of number of nests in national registry is not in correlation, because every year there are also removed certain amount of nests. Causes for this are different, abandoned nests, broken nests, natural damages, found errors in registry, etc. Also some delay could happen with register updating. New nests are often found on the same territories (area of territory depends on species, smallest for *A. pomarina*, with radius 2km), where previous known nests have been broken down, abandoned etc, then the old nest has been removed and new one included. There are not exact rules, when the nest should be removed from registry. It has been based on expert opinion of Eagle Club. During 2003-2008 there were removed 94 nests of *A. pomarina* from registry.

**Public awareness.** Fulfilment of the actions E1 - E8 will decrease the disturbance during the breeding season, through explanation of ecological needs of target species. Results are possible to evaluate by counting the violations of Nature Conservation Law in protected nest sites.



- **In 2004**, 3 violations of the law in protection zones were registered during the annual monitoring scheme.
- **In 2005**, 2 violations of the law were registered.
- **In 2006**, 2 violations of the law were registered.
- **In 2007** 2 violations are registered.
- **In 2008**, 3 violations of the law were registered.
- **In 2009**, 1 violation of the law is registered up to 31.08.09.

The number of violations is too small for to evaluate success, one or two accidental violations or unnoticed some violations could affect too much on result. In general we can't see any remarkable change in registered violations number. Though after very intensive work on awareness rising we can't believe, that the attitude remained the same as before the project start.

Additionally, according to the sociological study (see A4 and annexed study reports), the attitude of people towards the eagles has changed during project time. As we proposed, the knowledge about eagles has raised; people are more agree, that these species have to been specially protected on sites; that the restrictions are reasonable measures, but the land owners are less agree with the restrictions on their own lands, as there are missing compensative schemes.

## Evaluation and conclusions

Some aspects of self assessment are given in descriptions of actions, but here we provide evaluation according the foreseen structure.

Project management has been organised by hired project manager, who tried to take also part in field works and seminars, to install web cameras, to keep diary about webcam nest, to communicate with land owners, to keep eye on restoration, to organise international co-operation etc. That means for real manager work in office was left too few time... Probably there was needed full time manager to archive almost the tasks. Manager's tasks were partly filled by awareness specialist, instead. But finally almost the everyday work is made, though some additional tasks appeared to work with. Probably best way for similar projects is to hire professional project manager, who is not interested in field works, but keeps all papers in order and follows calmly the time table.

Project partners were with different attitude – no problems with **Environmental Board** (and its predecessors, Soomaa NP Administration and State Nature Conservation Centre), rather this organisation was active itself. Without of beneficiary's demands they solved many difficult situations with flood plains restoration. EB searched for additional funding and after termination of EAGLELIFE they continue maintenance on restored sites. EB organised also 74 beef-cattle for land owners and farmers in Soomaa NP, with goal to increase sustainability and for to ensure continuity of maintenance on flood plains. EB is the main funding partner for to implement the Action Plans of target species. Only problems with this partner were several reorganisations and during every case some months were lost. **Eagle Club** is rather small NGO, but is mainly implementing Action Plans (with partnership of EB) of target species and other eagle species in Estonia. They are working with eagles and black stork about 20 years already, so Eagle Club builds the staff for Eagle Centre (established with current project) and will work there in future. Same kind of activities they performed also before and that experience was absolutely necessary

during implementation of EAGLELIFE. During current long term project Eagle Club got also new knowledge and ideas to follow on. Their official aim is that the eagles and black stork should impress Estonian landscapes in the future too... **Private Forest Association** was probably our smallest partner, who took part only in certain actions. But communication with land owners was often made through them. Some 500 copies of booklet they have been disseminated through their channels up to reporting time. **Ministry of Environment** was in the beginning of project quite active and they helped to compose project application. But if their task – land acquisition was hot topic already, they jumped beside and almost activity was left to beneficiary. Nevertheless, the help by getting co-financier agreed – there was Ministers personal impact used. Now we hope for Ministers adoption of updated Action Plans. But MoE is not main national partner in practical species conservation anymore, rather this is EB.

**Success** of EAGLELIFE project is probably in huge amount of restored areas, also that purchase of lands from (not friendly) land owners was really finished within the project. If to compare with similar restoration projects in other countries, then we made very cost effective work on flood plains, though probably during the missions the External Team and Desk Officer noticed the hard conditions for restoration. Successful was organising of sociological studies, seminars and media work, also web cameras and using of transmitters on storks and eagles. Finding of great number of new nests needs to mention as only known nests are surely protected.

**Failures** were not far, especially with land acquisition and getting of restoration target. Failure is probably with updating of Action Plans, according what we still need to wait for adaptation and approval of MoE. Some failure is with web site updating, what did not be as quick as manager proposed. There was a mistake in the estimation of restoring area in Soomaa NP, where after exact inventory on flood plains there was nearly 1/3 less to restore. Also we could read the failure in estimation of project time – we simply weren't able to implement the project with proposed time, especially this is about restoration and weather conditions. Managers opinion is that all the staff was hired with quite low salary expenses, based on statistics of year 2002 (we composed proposal at 2003).

**Overall objective** – to secure the favourable conservation status of target species – we think to be **archived**, though several results would be more satisfactory.

Specific objectives are also reached:

With restoration of flood plains and with establishment of micro reserves is guaranteed habitats preservation of target species within Natura 2000. Population is (at least) stabile only for two target species; Greater Spotted Eagles population is still decreasing (due the hybridisation, what is not under our control, that could be natural process at the moment with this eagle).

The previous Action Plans for target species are implemented as well as no one before in Estonia. Awareness rising activities were very successful and there was made much more as proposed in application, actually it is easy for attractive species as the eagles are... And through eagles we tried to turn overall attitude of public more greenish. The same we should say about international communication and co-operation about conservation of target species. Within last specific objective about facilitating the MoE - we have prepared for MoE the drafts of micro reserves for all target species nest sites situated outside reserves. And prepared also updates for two Action Plans and handed over to Ministry.

In the beginning of the project we proposed to MoE the project of micro reserves, ie to involve into Nature Conservation Law the chapter about species protection sites = micro reserves. That was approved and used in new law. Also drafts of micro reserves are one legislation implications. There were involved several micro reserves of Black Stork and GSE to Natura 2000 network

**Innovative** were in EAGLELIFE the web cameras in remote nest sites with reached stream quality and using of GPS transmitters. Both were somewhat used also before our project, but in that results probably no. Nearly 20 times we answered to questions about our experience with these two technical solutions. At least in Latvia our colleagues build up the same webcam system. GPS transmitters are used for species conservation purposes in many countries by now. In project management level we suggest use sociological studies, if in the project is planned some work with public. Our study reports could be good example, how to prepare that.

**Socio-economic effects.** The restoration of flood plains builds good opportunity for local farmers and other people to work with these areas in the future. The cattle breeding is one way, but also alternative energy projects are possible. In Matsalu this already works and hay is used for heating directly and through marsh-gas generators. Publication of booklets and DVD in Russian language helps to integrate this part of citizens to nature conservation and to society. People need more information about nature conservation and especially about what is directly touching those (based on sociological studies), so our project has somewhat already filled that need. And in the future this learning-informing activity will continue (according Action Plans). Seven land owners got happy with selling the lands to EAGLELIFE. Additionally those strict protection is secured in the future.

The **future sustainability** is described under most actions, as sub-chapter *after-LIFE*. Overall sustainability looks promising as on flood plains the EB is active and lot of efforts are already made for to ensure future maintenance. Also local farmers are applying on Agri-Environmental supporting schemes and additionally they are going to establish herds of cattle. For **species protection in the future** is responsible Eagle Club, having a long term experience in this field and using the rooms of Eagle Centre and equipment obtained by the project. Also co-operation between these two organisations is very tense at the moment. Of course we can't be sure in political situation what could turn in the future. For example our colleagues from Lithuania informed that there is species protection not listed as important topic in nature conservation – therefore is very difficult to get funding for species protection projects. Hopefully that will not to be a case in Estonia! Probably no more land will purchased by NGOs or EB, but state is obliged to purchase according “ordering decree” those restricted lands in order, being also within micro reserves of target species. We can't predict the time table for that action.

**Long term indicators for the project success** would be:

- ✓ maintained area on restored flood plains (per year and summary of all area);
- ✓ number of protected nest sites of target species;
- ✓ number of initiated actions, based on new knowledge obtained through GPS transmitters;
- ✓ number of placed web cameras in eagles' habitat;
- ✓ number of clicks opening project webcam streams;
- ✓ trends of productivity and population size of target species;
- ✓ % of implemented actions in updated action plans;
- ✓ number of international projects launched.

## Comments on Financial Report

Table Variations in budget categories

Category	Original budget (Third Add. Clause)		Real budget		Variation
	Total eligible costs in € (A)	% of total eligible costs (B)	Total eligible costs in € (C)	% of original bdg costs (D)	In € (E=C-A)
1. Personnel	179 850	21	185 419	103	5 569
2. Travel	41 055	5	40 890	100	-165
3. External assistance	356 587	42	472 909	133	116 322
4. Durable goods	70 428	8	65 633	93	-4 795
5. Land purchase	143 000	17	141 938	99	-1 062
6. Consumable material	26 546	3	31 002	117	4 456
7. Other costs	12 212	1	18 959	155	6 747
8. Overheads	16 940	2	14 103	83	-2 837
<b>TOTAL</b>	<b>846 618</b>	<b>100</b>	<b>970 854</b>	<b>115</b>	<b>124 236</b>

According the overall project budget table above, the real costs in budget lines are in frames of 10 000€, as stipulated in SAP, excluding External assistance. External assistance is remarkable higher, because we (particularly our Partner EB/SNCC) used additional national funding for to meet project target within action D1 (Restoration of flood plains). Description of additional funding is in technical report of D1. If that additional funding, included to the financial report, is the problem for the evaluation of the project – we could easily remove these costs from table, but that seems no problem, if a Partner increases its own contribution in the project... We know that the final payment (contribution) of EC will remain the same as written in an approved project application and in Additional Clauses.

Purchasing of a digital photo-video camera near the end of the project is clarified in E5 action.

In Financial Report base (downloaded from LIFE website) “Other cost” table does not enable the year 2009. Instead is used 2008.

With current Final Report are submitted following invoices or relevant documents (as asked in Commissions letter dated 20/09/2006):

For year 2004 the invoices (accepting acts) numbered twice: 1,2,3,6,7,8,9

The same under year 2005: 1, 11

These accepting acts, according what the payments are made by Soomaa National Park Administration are used with two different systems.

1. Subsidies to land owners according the restoration of private owned flood plains, where the numbering is regular 1, 2, 3...

2. Ordered external assistance for to restore state owned flood plains, where is also regular numbering of accepting acts.

Therefore numbers of payment documents are the same. Actually the area and location of land according these documents with same number is absolutely different.

Also are submitted invoices of all equipment expenses.

According to Commissions suggestion (20/09/2006) about time unit used in Personnel table – we confirm, that time units are reported now in hours.



## ANNEXES

1. Copy of Ministers decree (No 610) about adoption of Greater Spotted Eagle Action Plan A6
2. Confirmation of Ministry Of Environment about *Aquila pomarina* and *Ciconia nigra* Action Plans adoption A6
3. Maps of purchased lands B1
4. Maps of restored areas in Soomaa D1
5. Maps of restored areas in Käntu-Kastja D1
6. Maps of restored areas in Keeri-Karijärve D1
7. Maps of restored areas in Matsalu D1
8. Maps of restored areas in Alam-Pedja D1
9. Amended contract about DVD producing E1
- 10.Seminar list E4
- 11.Media list E6
- 12.Proof of Customs and Tax Board about VAT (Financial Report)

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Deliverables submitted with Final Report:

- 13.Booklet “Eagles and Black Stork in Estonia” (Eng, Est, Rus) E2
- 14.Reports of both sociological studies (2008-2009) A4
- 15.Last version of “Guidelines for to work with landowners” A5
- 16.Action Plan of Black Stork (current version) A6
- 17.Action Plan of Lesser Spotted Eagle (current version) A6

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2 copies of Financial Report

Digital version of reports (Financial and Technical) on CD

Images and videos about project on DVD

## **After-LIFE conservation plan**

Some aspects of after-LIFE are described within actions and in other previous chapters.

The continuation and/or development of actions initiated by EAGLELIFE project is quite seriously discussed with Partners and the results are following:

Action Plans implementation is organised by EB in state level and by Eagle Club in NGO level. Fruitful is probably co-operation between these both.

New Action Plans composing will be the task for Eagle Club or Estonian Ornithological Society, but ordering is still unclear (either MoE or EB).

Land acquiring on restricted land plots remains to MoE, as roof organisation to Land Board, who is keeping the “order list”.

Restored area maintenance is a task for EB, in long and short time perspective. If only the organisation will not reorganized again...

Species site protection sites are the duty of MoE, but could be in long term, that this goes over to EB. Anyway there are no signs visible about losing those in Nature Conservation Law. Preparation work for amendments or by need for new rules will be made by Eagle Club.

Main source for Action Plans implementation is EIC, but in future it could be partly forwarded to EB budget. Also EU or other funds could be used, especially for international projects.