



AFTER-LIFE CONSERVATION PLAN



LIFE07 NAT/LT/000531

Conservation of White Storks (*Ciconia ciconia*) in Lithuania





1. An overview of the project history and an assessment of the situation at the end of the project

Situation before the LIFE project

The last complete inventory of the breeding White Stork population in Lithuania before the LIFE project was carried out in 1994, when the number of occupied nests was estimated at 9,400. More recent estimates (2001), not based on a complete inventory, suggest that the breeding population of White Storks in Lithuania has increased to 12,500–13,000 breeding pairs. At the time Lithuania accommodated ca. 11% of the European population. Although White Stork is included in the Annex I of the EU Birds Directive, it is not included in the Lithuanian Red Data Book because of the large local population size and favourable population status. Although Lithuania harboured a rather important part of the European population of the White Stork, there was no White Stork Species Action Plan, which would foresee a long-term strategy for the protection of this species and be legally binding for the involved parties. Such a plan was essential for ensuring the long-term effective protection of the species.

Because of the decrease of suitable nesting locations (old water towers had been taken down, few large trees remained in the countryside, etc.) the number of White Storks nesting on the overhead electricity line poles had increased out of proportion, and this caused both the conflict between human activities and the birds (electricity distribution companies were required to remove bird nests by their electricity line exploitation rules), and a direct threat to birds – nests catching fire, falling out because of poor support or breaking electricity wires, birds becoming electrocuted because of the proximity of electric wires to the nests. Nests located on the overhead electricity line poles were the most problematic. Although Lithuanian electricity distribution companies at their own initiative and expense were installing nesting platforms in place of the most problematic White Stork nests on electricity wires, the number of such platforms was very small in relation to the ever-increasing number of such nests. This problem, in part, was one of the driving forces behind the initiation of the LIFE project. Furthermore, new comprehensive data was lacking on the population of the White Stork in Lithuania, which was essential for planning and implementing any effective conservation measures as well as for evaluation of various threats and changes in the population.





Objectives and actions of the LIFE project

The aim of the LIFE project “Conservation of White Storks (*Ciconia ciconia*) in Lithuania (LIFE07NAT/LT/000531)” was to ensure long-term effective protection and favourable conservation status of the White Stork (*Ciconia ciconia*) in Lithuania. Since this species is widely distributed in Lithuania, this aim was achieved by implementing actions affecting the species in the entire country. During the LIFE project the following activities were implemented:

- Inventory of White Stork nests in Lithuania
- Elaboration of White Stork nest GIS database and data analysis
- Elaboration of White Stork nest management measures
- Adjustment of legislation related to the protection of White Stork nests
- Elaboration of White Stork species action plan for Lithuania
- Identification of most important sites for White Storks in Lithuania
- Erection of nesting platforms on overhead electricity line poles
- Erection of nesting platforms on roofs of buildings
- Production and distribution of project leaflets
- Production and erection of project notice boards
- Creation and maintenance of project website
- Development and maintenance of interactive on-line White Stork nest GIS-based website
- Set-up of White Stork nest web-cam
- Drafting, production and distribution of a book on the White Stork in Lithuania
- Production of a film on the White Stork in Lithuania
- Public awareness raising in media
- Public events – the White Stork Day
- Monitoring of the project achievements



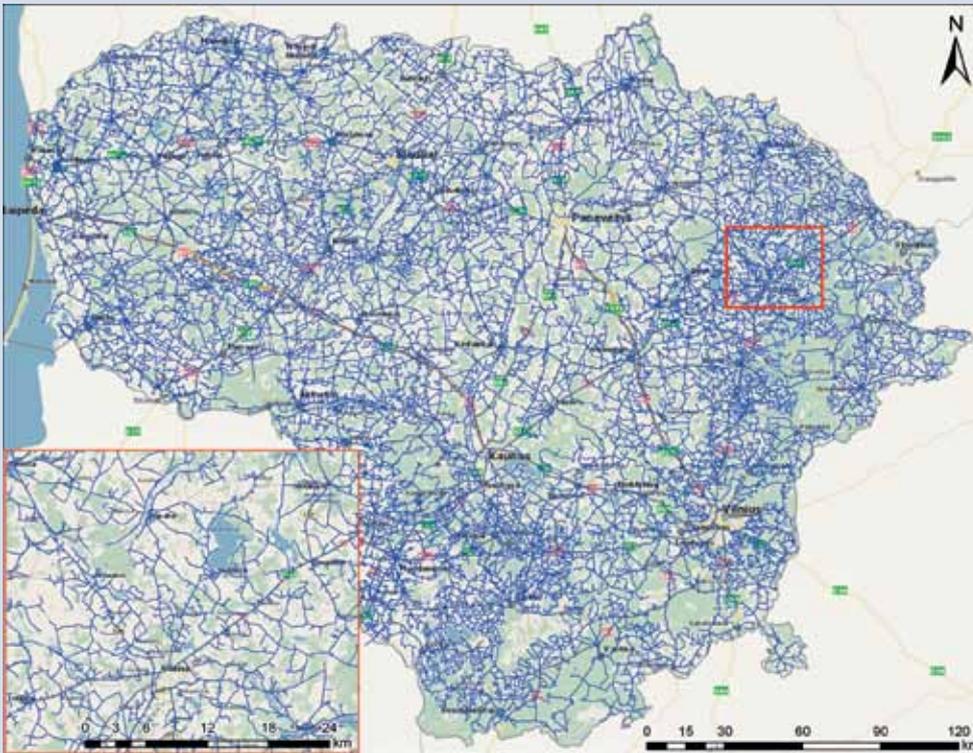


Results of the LIFE project

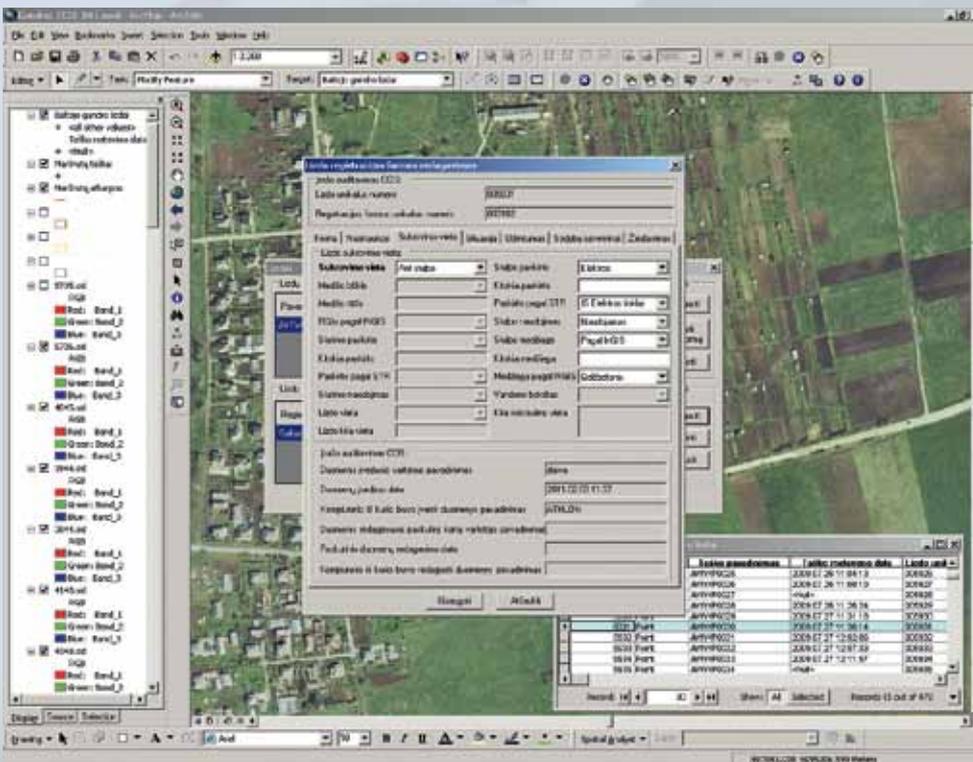
All the activities, foreseen in the project, have been implemented successfully and in full capacity, with original project goals in some cases being greatly exceeded:

- A comprehensive White Stork nest inventory was carried out in the entire country with ca. 22,000 White Stork nests being recorded; all data compiled in the specially designed GIS database
- An on-line GIS database of White Stork nests has been created and published on the Internet with open access to the public and the possibility of feedback
- White Stork Species Action Plan has been prepared and officially endorsed by the Ministry of Environment
- White Stork nest conservation measures have been elaborated and some of them already implemented during the project, while others have been included into the Species Action Plan for implementation in the future; these measures include replacement of bare wires under White Stork nests with an aerial insulated cable or using special plastic protective covers on bare wires to reduce corrosion
- Methodology for the identification of areas most important for White Storks has been prepared and a list of the most suitable SPAs has been proposed for designation; these potential SPAs include Rambynas, Vištytis, Salantai, Meteliai and Varniai Regional Parks.
- 3260 White Stork nests on overhead electricity line poles have been managed by installing special nesting platforms, i.e. the original project target of 1760 nests was almost doubled
- 500 nests in poor condition on roofs of buildings were replaced by special wooden nesting platforms
- As an additional measure, initially not foreseen in the project, 20 nests in trees in particularly poor condition were managed as a demonstration activity
- Project website was created, maintained and updated with the information on the project progress and on White Stork ecology and conservation
- A film about White Storks „White Storks always come back...“ was produced and broadcasted on local, regional and national TV channels and is also available on the Internet
- A book on the White Stork „White Stork in Lithuania. Nest Atlas“ was published and distributed to various stakeholders and is also available for download from the project website
- A live webcam broadcast from a White Stork nest was implemented during several breeding seasons
- Other public awareness and dissemination activities were implemented:
 - Public events – White Stork Days
 - Project leaflets and badges
 - Project notice boards
 - Articles in newspapers, magazines, on the Internet
 - Radio and TV interviews and video clips
 - Two publications in international peer-reviewed scientific journals
 - Project results presented in two international scientific conferences
 - A doctoral dissertation, partly based on the LIFE project data, was successfully defended.





Survey tracks covered by surveyors during the White Stork nest inventory in 2009–2010

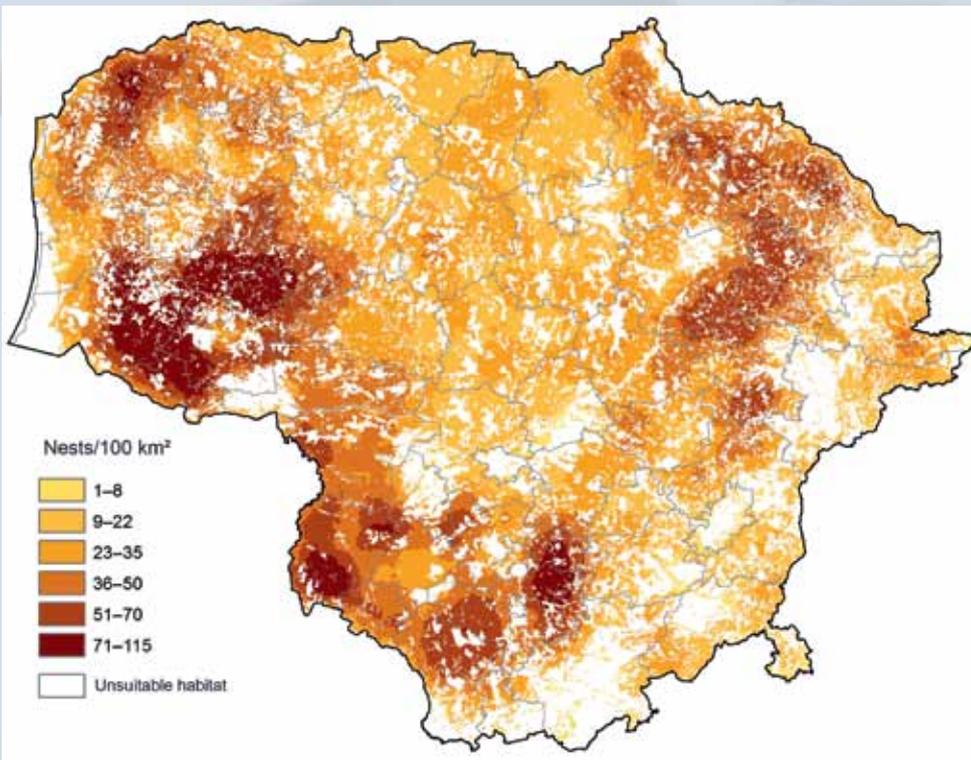


Screenshot of the data input interface of the White Stork nest GIS database, created during the project



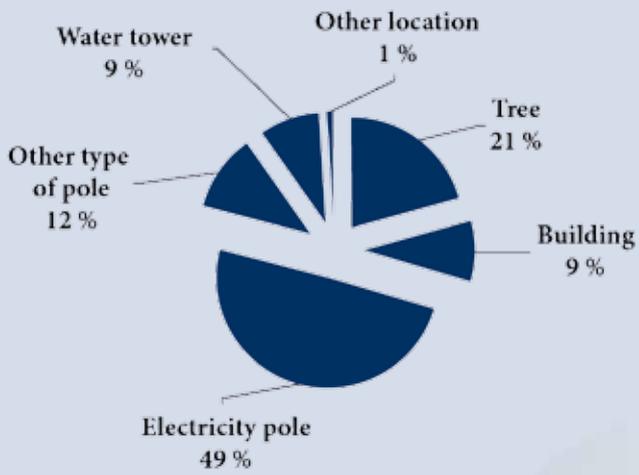


White Stork nests, recorded during the nest inventory in 2009–2010 (each red dot represents a single nest)



Distribution of White Stork nest density, estimated from the nest inventory data





Distribution of White Stork nests, recorded during the inventory, among different nests sites



Management of nests in trees during the project

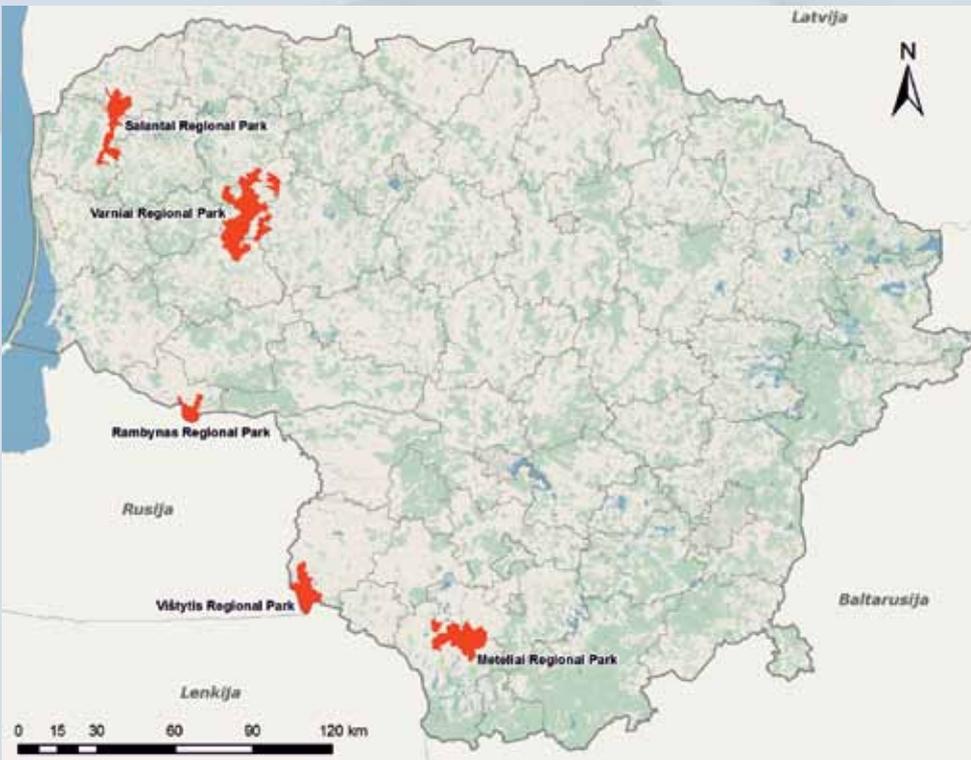




Management of nests on overhead electricity line poles during the project



Management of nests on roofs of buildings during the project



Special Protected Areas, proposed by the project for the protection of White Storks





The cover of the book about White Storks – „White Stork in Lithuania. Nest Atlas“



A sample book spread from the book „White Stork in Lithuania. Nest Atlas“





Current situation

Based on the results of the White Stork nest inventory, implemented during the LIFE project, Lithuanian White Stork population was estimated at ca. 19,500 breeding pairs, indicating a two-fold increase in population abundance since the last White Stork inventory in 1994. The mean breeding density was 30 breeding pairs/100 km², which is the highest breeding density, reported across the entire White Stork breeding range, suggesting that current environmental conditions are favourable for the species in the country. However, it is important to note that half of the White Stork nests at present are built on overhead electricity line poles, compared to only 13% in 1994, indicating the need for continued management of such nests. Furthermore, abandonment of nests in trees – a natural nest site of this species – is evident and most likely results from the lack of appropriate management. However, on the whole it may be concluded that the input of the LIFE project towards the management of White Stork nests has contributed significantly to the improvement of the conservation status of this species. On the other hand, the quality and possible future changes in the feeding habitats of the White Stork, which were not addressed during this LIFE project, remain an important issue and a knowledge gap for the conservation of White Storks in the future in Lithuania. The importance to pay more attention to these issues has also been highlighted in the White Stork Species Action Plan, which has been prepared and adopted during the LIFE project, and implementation of which is a key prerequisite for successful conservation of White Storks in Lithuania in the future.





SWOT Analysis

STRENGTHS

- Detailed knowledge on White Stork population in Lithuania acquired to provide good baseline data for further conservation actions and population monitoring
 - In depth knowledge of White Stork conservation requirements and the effectiveness of management measures is now available
 - White Stork Management Plan in Lithuania has been officially approved
 - Successful and tested species monitoring methods and nest management measures developed during the project
 - The project has proven that large-scale management on White Stork nests quality is possible
 - Positive cooperation with national and international White Stork conservation experts established during the project
 - Project kick-started scientific research into White Stork biology, ecology and conservation in Lithuania

OPPORTUNITIES

- Implementation of the White Stork species action plan, prepared and approved during the project, should further improve the conservation status of the species
 - Ongoing designation of Natura 2000 sites for the White Stork should facilitate conservation of the species
 - Inclusion of White Stork population monitoring into State environmental monitoring program
 - Massive amounts of data produced in the project and available publicly may be used by NGO's, conservationists and scientists
 - Dissemination actions have improved public awareness of the White Stork conservation issues, which may further facilitate species' conservation

WEAKNESSES

- Although more than 3000 nests have been successfully managed during the project, the settlement of White Storks on overhead electricity lines is ongoing and the need for further management of nests is evident
 - While the issue of nest-site conservation has been addressed in detail, conservation of feeding habitats has not been addressed

THREATS

- Already ongoing changes in agricultural practices (intensification, increased use of chemicals, monocultures, etc.) and policies may have an adverse effect on the White Stork population through the degradation of feeding habitats
 - Misconceptions, often perpetrated in the public media, about the effect of White Stork on small wildlife may hamper conservation efforts of this species
 - The fact that White Stork population in Lithuania is abundant results in low priority and low financing of its conservation in the country, despite the species' protected status across Europe
 - Too weak public awareness on the scenario that breeding population of the White Stork can start decreasing because of the loss of feeding habitats and breeding sites
 - Despite old cultural traditions, people of the new generation sometimes requests to remove nests of the White Stork from their homesteads
 - The absence of local knowledge on foraging habitat use and of foraging habitat conservation measures
 - Still rather high mortality rate of birds due to electrocution on overhead electricity lines, collisions with vehicles





2. After-LIFE objectives and methodology

Objectives

To contribute to the maintenance of favourable conservation status of the White Stork in Lithuania

To contribute to understanding of the conservation needs of the species, particularly in relation to feeding habitat requirements

To improve public awareness of the role and interactions of the White Stork in farmland ecosystem and the species' conservation needs

Conservation priorities

Since no protected areas have so far been established in Lithuania for the protection of the White Stork specifically, the following conservation priorities are defined for the entire Lithuanian White Stork population and the entire territory of the country. These conservation priorities address the main existing and potential threats arising to the White Stork population in Lithuania and are in line with the objectives and proposed measures of the White Stork Species Action Plan, prepared and adopted during the LIFE project (action A.5).

1. Establishment of a sufficient network of protected areas for the White Stork in Lithuania

1.1. Finalisation of the designation of SPAs, proposed under action A.6 of the LIFE project, for the protection of the White Stork, including adequate zoning

1.2. Selection, delineation and designation of new protected areas for the White Stork, following the methodology, proposed during the project (action A.6)

2. Continued management of White Stork nests

2.1. Continued installation of nesting platforms in place of nests built directly on overhead electricity lines. According to the White Stork nest inventory data, at least 4000 nests may need such management during the coming six years.

2.2. Proper management of disused overhead electricity line poles with White Stork nests. White Stork nests that remain on overhead electricity line poles after the lines are disused (electricity no longer supplied, electric wires removed) face additional threats irrespective of whether a nesting platform is installed or not. The main arising problem is the stability of the pole itself – electric wires under tension ensure the pole's stability and without them, and considering the additional weight of the nest, they often start to lean and even fall or, in rare cases, brake in the middle. Thus, one of the appropriate management measures would be installation of guy-wires for the electricity poles in cases where problems are already apparent.

2.3. Adequate improving of the legislation related to White Stork nest protection on the overhead electricity lines. Several legal acts on species protection should be improved in order to allow for quick solutions in case of emergencies (e.g. broken electricity wires) as well as for removal of loose branches from the wires, which are a manifestation of learning behaviour by immature or non-breeding birds and are not related with breeding or building of a permanent nest. Furthermore, legal basis should foresee responsibilities and management of disused overhead electricity line poles with White Stork nests.

2.4. Public awareness raising regarding the management needs and methods of the White Stork nests - optimal platform design, tree pruning around nests, maintenance of too high or leaning nests, etc. Leaflets for homeowners





with recommendations on nest management, including tree pruning and platform installation, articles in local (district) newspapers before the White Stork breeding season, Internet articles on the LOD, MoE, NRC websites.

2.5. Fundraising for the management of problematic nests on roofs of buildings and/or in trees in households of elderly people. According to the White Stork nest inventory data and information collected from the public by LOD, at least 500 nests in trees are assessed as of bad quality and should be managed properly. Furthermore, newly collected information from the house owners, indicates that at least 100 nests on building roofs are problematic and should be replaced with the nesting platforms.

3. Maintenance of suitable feeding habitats for White Storks

3.1. Targeted research on White Stork diet and habitat use. In view of ever-increasing speculations in the public media, often propagated by hunters, but in some cases even by high-ranking officials, regarding the possible negative impact of the increasing White Stork population on other wildlife species (hares, ground nesting birds, etc.) and considering the absence of appropriate and relevant studies that could supply facts for such a discussion, also considering that changes in agricultural practices may rapidly alter the foraging habitats and the food resources of the White Stork with so far unknown consequences for the species, detailed targeted research into White Stork diet and habitat use in Lithuania as well as into its role in and interrelationships with other components of the agro-ecosystem is urgently needed.

3.2. Preparation of recommendations for optimal management/agricultural practices to sustain favourable foraging habitats for White Storks. The recommendations should be prepared by 2020, i.e. before the next EU Programming period including elaboration of new EU RDP.

3.3. Inclusion of White Stork into agri-environmental schemes as an indicator species. The species should be included into agri-environmental schemes by 2016, i.e. during the revision of the current national RDP.

3.4. Public awareness raising on White Stork ecology and its role in the ecosystem of agricultural landscape. As mentioned above, a lot of unfounded speculations are being perpetrated in public media regarding the possible effect of White Storks on other wildlife in agricultural landscape. Public awareness raising should be done based on available facts and the results of targeted research.

4. White Stork population monitoring

4.1. Inclusion of sampling-based White Stork population monitoring (both abundance and breeding performance parameters) into the State environmental monitoring programme by 2017

4.2. Carrying out a country-wide White Stork nest inventory at least once every 10 years starting from 2020.

4.3. Continued operation of the on-line GIS White Stork nest database with the continuously feedback option for accumulation of information on White Stork nests from the public: <http://ecogis.ekoi.lt/ciconia>

5. Ensuring appropriate care for injured White Storks

5.1. Public awareness raising annually on actions to be taken when dealing with injured White Storks

5.2. Ensuring sufficient funding and capacity for dealing with injured birds, which end up in human care by MoE starting from 2016

6. Public awareness raising on White Storks and further dissemination of LIFE project achievements

6.1. Continued dissemination of information on project achievements and White Stork related news through the project web site www.ciconia.lt each year including individual consultations for the public consultations by LOD staff

6.2. Continuous dissemination of the scientific research results on White Stork ecology through publications in scientific and popular press, participation in international conferences, working with media





3. Funding needs and the sources of funds

Table below summarises the priorities, potential responsible organisations and possible funding sources of different actions for the conservation of White Storks (numbers of conservation actions correspond to the number of conservation priorities above)

Activity	Timetable / due date	Necessary estimated funding	Funding source	Responsible institution or organisation	The progress by 2015
1. Establishment of a sufficient network of protected areas for the White Stork in Lithuania					
1.1. Finalisation of the designation of SPAs, proposed during the LIFE project	2015	3000 EUR	State budget, NGO own budget	MoE, PAS, LOD	Two official meetings with authorities
1.2. Selection, delineation and designation of new protected areas for the White Stork	2020	15000 EUR	State budget, LOD own budget, EU funds	MoE, PAS, LOD	Not started yet
2. Continued management of White Stork nests					
2.1. Continued installation of nesting platforms on overhead electricity line poles (at least 4000 nests may need such management)	Every year as necessary during the period 2015-2020	600000 EUR	State/municipal budget, EU funds, electricity companies	Electricity companies	Several hundred platforms already installed
2.2. Management of disused overhead electricity line poles with White Stork nests (at least 2000 such cases may exist)	Every year as necessary during the period 2015-2020	200000 EUR	State/municipal budget, EU funds, electricity companies	Electricity companies, MoE	Not started yet
2.3. Adequate improving of the legislation related to White Stork nest protection on the overhead electricity lines	2017	Working voluntary time of the staff	State budget, LOD own budget	Ministries, LOD	One official meeting with relevant stakeholders including MoE and MoEn
2.4. Public awareness raising regarding the White Stork nest management needs and methods: leaflets for homeowners with recommendations on nest management, including tree pruning and platform installation, articles in local (district) newspapers before the White Stork breeding season, Internet articles on the LOD, MoE, NRC websites	Annually, preferably before the breeding season	1000 EUR plus working time of the staff	EU funds, LOD own budget	NGOs, MoE, LOD	Several publications in media
2.5. Fundraising for the management of problematic nests on roofs of buildings and in trees	Annually	3000 EUR / year	State/municipal budget, EU & other funds	NGOs, LOD	Ongoing
3. Maintenance of suitable feeding habitats for White Storks					
3.1. Targeted research, including international cooperation, on White Stork diet and habitat use	2016-2020	200000 EUR	Funding sources for scientific research, LIFE programme	NRC, LOD	Ongoing in small scale from NRC own funds





3.2. Preparation of recommendations for optimal management/agricultural practices to sustain favourable foraging habitats for White Storks	2020	5000 EUR	Funding sources for scientific research, LIFE programme	NRC, other scientific institutions, LOD, NGOs	Not started yet
3.3. Inclusion of White Stork into agri-environmental schemes as an indicator species	2016	N/A	N/A	Ministries, NGOs, LOD	Not started yet
3.4. Public awareness raising in media on White Stork ecology and its role in the ecosystem of agricultural landscape: public awareness raising should be done based on available facts and the results of targeted research	Annually	Staff labour time	Funding sources for scientific research, own resources	NRC, universities, NGOs, LOD	Several publications on the Internet media
4. White Stork population monitoring					
4.1. Inclusion of sampling-based White Stork population monitoring into the State environmental monitoring programme	2017	Labour time of the staff	State budget	MoE, NRC	Not started yet
4.2. Carrying out a country-wide White Stork nest inventory at least once every 10 years	2020 and every 10 years thereafter	150000 EUR for one country wide nest inventory	State budget, EU & other funds, private	NRC, LOD	N/A
4.3. Continued operation of the on-line GIS White Stork nest database with the feedback option	Continuously	1000 EUR / year	Own resources	NRC	Ongoing
5. Ensuring appropriate care for injured White Storks					
5.1. Public awareness raising on actions to be taken when dealing with injured White Storks: articles with recommendations what to deal with found injured birds in local (district) newspapers, Internet articles on the LOD, MoE, NRC websites before the White Stork breeding season	Annually, preferably during the breeding season	Labour time of the staff	State budget, EU funds, other	MoE, NGOs, LOD	Ongoing
5.2. Ensuring sufficient funding and capacity for dealing with injured White Storks Until 2016 this problem covered by the contract between MoE and Animal Welfare Association	2016	20000 EUR / year	State budget, EU funds, private	MoE, NGOs	Not started yet
6. Public awareness raising on White Storks and further dissemination of LIFE project achievements					
6.1. Continued dissemination of information on project achievements and White Stork related news through the project website including individual consultations for the public	Continuously	1000 EUR / year	Own resources	LOD	News on website, up to 100 individual consultations by phone during White Stork breeding season
6.2. Dissemination of the scientific research results on White Stork ecology	Continuously	Labour time of the staff	Scientific and NGO staff costs	NRC, other scientific institutions, NGOs, LOD	PhD work defended

PAS – Protected Areas Service

NRC – Nature Research Centre

Universities – universities with Ecological study programmes

LOD – Lithuanian Ornithological Society

NGOs – other non-governmental organizations except the Lithuanian Ornithological Society: Lithuanian Fund for Nature, Baltic Environmental Forum, Lithuanian Centre of Arboriculture, others



