

# Agreement on the conservation of populations of European bats

## National implementation report of Estonia

### A. General Information

**Party:** Estonia

**Date of Report:** September 2014

**Period covered by report:** August 2010 – August 2014

**Competent Authority:** Ministry of the Environment, Narva mnt 7a, 15172 Tallinn, Estonia

**Appointed administrative focal point:** Üllar Rammul, Ministry of the Environment, Narva mnt 7a, 15172 Tallinn, Estonia

**Appointed scientific focal point:** Triinu Tõrv, NGO Suurkõrv, Liiva 37, 11615 Tallinn

**This report was compiled by:** Triinu Tõrv

### B. Status of Bats within the Territory of the Party

#### 1. Summary Details of Resident Species

No changes in the number of species have occurred since the report to the MoP6. 12 species of bats occur in Estonia (table 1). In recent years there have been couple of occurrences of *Vespertilio murinus* in the winter season in apartment/office buildings which might imply that the species is not completely migratory.

Table 1. Species list for Estonia

| Species name in Latin            | Species name in Estonian | Species name in English |
|----------------------------------|--------------------------|-------------------------|
| <i>Eptesicus nilssonii</i>       | Põhja-nahkhiir           | Northern bat            |
| <i>Myotis brandtii</i>           | Tõmmulendlane            | Brandt's bat            |
| <i>Myotis dasycneme</i>          | Tiigilendlane            | Pond bat                |
| <i>Myotis daubentonii</i>        | Veelendlane              | Daubenton's bat         |
| <i>Myotis mystacinus</i>         | Habelendlane             | Whiskered bat           |
| <i>Myotis nattereri</i>          | Nattereri lendlane       | Natterer's bat          |
| <i>Nyctalus noctula</i>          | Suurvidevlane            | Noctule                 |
| <i>Pipistrellus nathusii</i>     | Pargi-nahkhiir           | Nathusius' pipistrelle  |
| <i>Pipistrellus pipistrellus</i> | Kääbus-nahkhiir          | Common pipistrelle      |
| <i>Pipistrellus pygmaeus</i>     | Pügme-nahkhiir           | Soprano pipistrelle     |
| <i>Plecotus auritus</i>          | Pruun-suurkõrv           | Brown long-eared bat    |
| <i>Vespertilio murinus</i>       | Hõbe-nahkhiir            | Parti-coloured bat      |

## 2. Status and Trends

All 12 species belong to the protected category II according to the Nature Conservation Act of Estonia. *Pipistrellus pygmaeus* was added to the list of protected species 21.06.2014.

Table 2. Status and trends of bat species occurring in Estonia

| Species                          | Distribution and trend         | Red list status | Overall assessment of Conservation Status |
|----------------------------------|--------------------------------|-----------------|-------------------------------------------|
| <i>Eptesicus nilssonii</i>       | Widespread, trend positive     | LC              | FV                                        |
| <i>Myotis brandtii</i>           | Locally spread, trend unknown  | NT              | FV                                        |
| <i>Myotis dasycneme</i>          | Widespread, trend unknown      | NT              | U1                                        |
| <i>Myotis daubentonii</i>        | Widespread, trend stable       | LC              | FV                                        |
| <i>Myotis mystacinus</i>         | Rare, trend unknown            | DD              | XX                                        |
| <i>Myotis nattereri</i>          | Rare, trend unknown            | DD              | FV                                        |
| <i>Nyctalus noctula</i>          | Locally spread, trend positive | LC              | FV                                        |
| <i>Pipistrellus nathusii</i>     | Widespread, trend positive     | LC              | FV                                        |
| <i>Pipistrellus pipistrellus</i> | Locally spread, trend unknown  | DD              | FV                                        |
| <i>Pipistrellus pygmaeus</i>     | Rare, trend unknown            | -               | FV                                        |
| <i>Plecotus auritus</i>          | Widespread, trend unknown      | LC              | FV                                        |
| <i>Vespertilio murinus</i>       | Rare, trend unknown            | DD              | FV                                        |

\* Estimation from 2008. Categories according to IUCN red data book information is available online at: <http://elurikkus.ut.ee/prmt.php?lang=est>

\*Population trend estimation (based on partial data with some extrapolation and/or modelling) and overall assessment of conservation status according to Habitats Directive Art. 17 reporting. Habitats Directive Art. 17 summarizing table available at <http://bd.eionet.europa.eu/article17/reports2012/species/report/?period=3&group=Mammals&country=EE&region=BOR>

Table 3. Number of records per species in Environmental registry of Estonia (2014, aug)

| Species                                        | Number of records per species |
|------------------------------------------------|-------------------------------|
| <i>Eptesicus nilssonii</i>                     | 768                           |
| <i>Myotis daubentonii</i>                      | 399                           |
| <i>Pipistrellus nathusii</i>                   | 285                           |
| <i>Plecotus auritus</i>                        | 198                           |
| <i>Nyctalus noctula</i>                        | 138                           |
| <i>Myotis dasycneme</i>                        | 135                           |
| <i>Myotis brandtii (M.brandtii/mystacinus)</i> | 23 (104)                      |
| <i>Vespertilio murinus</i>                     | 79                            |
| <i>Pipistrellus pipistrellus</i>               | 48                            |
| <i>Myotis nattereri</i>                        | 36                            |
| <i>Myotis mystacinus</i>                       | 7                             |
| <i>Pipistrellus pygmaeus</i>                   | 4                             |

### **3. Habitats and Roost Sites**

Data on bat habitats and roost sites is accumulating thanks to research projects and activity of individual bat experts. Still, knowledge on habitat use and roost selection of many bat species is deficient. Most important habitats include old forests, parks with old trees, areas with wooden buildings, surroundings of lakes and ponds. Only some maternity roosting sites are registered in the Environmental Registry.

Important wintering sites are abandoned mines, artificial military underground spaces and limestone cellars all over the country. The list of important hibernation sites forwarded to EUROBATS includes Astangu, Humala, Laagri, Piusa, Ubja, Ülgase, Vääna-Posti and Viti hibernation sites (the list can be found at: [http://www.eurobats.org/sites/default/files/documents/Underground\\_sites/Estonia\\_sites\\_rev1.pdf](http://www.eurobats.org/sites/default/files/documents/Underground_sites/Estonia_sites_rev1.pdf) )

### **4. Threats**

According to Habitats Directive Art.17 reporting the threats to Estonian bat species are:

- intensive maintenance of public parks
- missing or wrongly directed conservation measures
- tree surgery, felling for public safety, removal of roadside trees
- death or injury by collision
- recreational cave visits
- closures of caves or galleries
- light pollution
- removal of dead and dying trees
- wind energy production
- reduction or loss of specific habitat features
- anthropogenic reduction of habitat connectivity
- use of biocides, hormones and chemicals
- reconstruction, renovation of buildings
- demolition of buildings & human structures
- predation

In general the threats can be divided into threats against maternity and other summer roosts (forestry, park management, renovating houses and other buildings, chemicals); threats against hibernating sites (disturbance, inappropriate management, closure); threats against feeding areas (forest managements, developing new housing areas, wind energy production, agriculture); lack of knowledge

### **5. Data Collection**

A new monitoring project in national environmental monitoring programme under biodiversity and landscapes sub-programme was launched in 2014 on pond bat (*Myotis dasycneme*). It covers 1) annual colony counts in known colonies and 2) point-counts in feeding habitats with new colony searches in a sample over entire state range. The data is used to get more adequate population size and trend estimates as well as distribution and change estimates for the next Habitats Directive report for this species.

The reports of the monitoring data 2010-2013 can be found at:

- Leivits, M. Keskkonnaamet. 2013. Eesti Riikliku Keskkonnaseire Eluslooduse mitmekesisuse ja maastike seire allprogrammi seiretöö "Nahkhiired" 2013 aasta koondaruanne.  
[http://seire.keskkonnainfo.ee/index.php?option=com\\_content&view=article&id=3148:nahkhiired-2013&catid=1283:eluslooduse-mitmekesisuse-ja-maastike-seire-2013-&Itemid=5762](http://seire.keskkonnainfo.ee/index.php?option=com_content&view=article&id=3148:nahkhiired-2013&catid=1283:eluslooduse-mitmekesisuse-ja-maastike-seire-2013-&Itemid=5762)
- Masing, M. 2012. Seireprojekti "nahkhiired" 2012. aasta töö kokkuvõte.  
[http://seire.keskkonnainfo.ee/index.php?option=com\\_content&view=article&id=2826:seireprojekti-&catid=1296:eluslooduse-mitmekesisuse-ja-maastike-seire-2012-&Itemid=5748](http://seire.keskkonnainfo.ee/index.php?option=com_content&view=article&id=2826:seireprojekti-&catid=1296:eluslooduse-mitmekesisuse-ja-maastike-seire-2012-&Itemid=5748)
- Masing, M. 2011. Seireprojekti "nahkhiired" 2011. aasta töö kokkuvõte.  
[http://seire.keskkonnainfo.ee/index.php?option=com\\_content&view=article&id=1327:2011-a&catid=965:eluslooduse-mitmekesisuse-ja-maastike-seire-2011&Itemid=3478](http://seire.keskkonnainfo.ee/index.php?option=com_content&view=article&id=1327:2011-a&catid=965:eluslooduse-mitmekesisuse-ja-maastike-seire-2011&Itemid=3478)
- Masing, M. 2010. Seireprojekti "nahkhiired" 2010. aasta töö kokkuvõte.  
[http://seire.keskkonnainfo.ee/index.php?option=com\\_content&view=article&id=1328:2010-a&catid=1004:eluslooduse-mitmekesisuse-ja-maastike-seire-2010&Itemid=3613](http://seire.keskkonnainfo.ee/index.php?option=com_content&view=article&id=1328:2010-a&catid=1004:eluslooduse-mitmekesisuse-ja-maastike-seire-2010&Itemid=3613)

In 2010-2013 data has been acquired within the monitoring scheme from 8 localities in the summer (Kuressaare, Röpina, Värskä, Jögeva, Loode, Tooma, Matsalu and Penijõe) and from 5 localities in the winter (Ülgase, Väna-Posti, Viti, Piusa and Humala).

In addition from the year 2008 migration monitoring has been carried out first in Kabli, in the last period in several localities. Information can be found (in Estonian) in 2013 monitoring report and on Kabli birdstation website:  
[http://kabli.nigula.ee/index.php?option=com\\_seire&view=seirechi&Itemid=27](http://kabli.nigula.ee/index.php?option=com_seire&view=seirechi&Itemid=27)

Data on bats can be also submitted to the e-Elurikkus database (<http://elurikkus.ut.ee>) or to the "Loodusvaatluste andmebaas" database (<http://loodus.keskkonnainfo.ee/lva/>) by experts, institutions or the general public.

## C. Measures Taken to Implement Article III of the Agreement

### **6. Legal measures taken to prevent the deliberate capture, keeping or killing bats, including details of enforcement actions used to support such measures**

- All 12 species belong to the protection category II according to the **Nature Conservation Act** of Estonia. *Pipistrellus pygmaeus* was added to the list of protected species 21.06.2014. Nature conservation act regulates deliberate capture, keeping or killing bats and conservation details.
  - <https://www.riigiteataja.ee/akt/108072014020>
  - <https://www.riigiteataja.ee/akt/118062014020>
- Regulation for **marking bats and birds** was renewed at 11.06.2011 (<https://www.riigiteataja.ee/akt/108062011001>)
  - This regulation also involves regulates handling and capturing bats. Although permits are not needed according to the act if not marking the animals in any way. Although the Nature Conservation Act prohibits removing protected animals from the nature without any permit. Permits for catching bats (without ringing or marking any other way) have been given during the last years.

- **Guidelines for preventing Rabies** (01.07.2014) mentions bats as one of the possible carriers of the virus and describes a rabid bat, but does not give any further guidelines concerning bats (<https://www.riigiteataja.ee/akt/128062014121>)

**All cases violating these acts are handled by the Environmental Inspectorate (EI)**  
(<http://www.kki.ee/eng/>)

- 2009-2012 there were no cases
- In 2013 there was one case involving being in a wintering site during the prohibited time. The case concluded in a fine.
- In 2014 (until 21.08.2014) EI is handling three ongoing cases involving bats. This involves also a case concerning Narva fortifications, which got also some press coverage in 2014. The case involves a company starting renovation work too early which lead to harming hibernating bats.

**The National Rescue Service** also gets occasionally calls concerning bats (2010-0; 2011 – 4; 2012 – 2; 2013 – 1; 2014 – 3). These involve mainly helping bats out of apartments.

**Responsibilities of the Environmental Board** (summary of selected communication in and through Environmental Board in annex)

- Compilation of the Action plan for protection of bats
- taking the conservation of bats into account when compiling protection rules and management plans for protected areas. Carrying out selected conservation management projects.
- taking the conservation of bats into account when accepting new planning documents (mostly when there are registered bat sightings in the area in question in the Environmental Registry)
- taking bats into consideration (ensuring that consideration is being given to bats) during the process of EIA/SEA
- providing conditions to developers ensuring the conservation of bats in result of development projects
- ensuring bats are taken into consideration in park management plans, felling of trees etc
- ensuring bats are taken into consideration (setting conditions) in forestry management
- issuing permits in connection with bats
  - 2010-2014 Environmental Board has issued 2 marking permits, 3 catching permits, 5 permits to go to protected sites (hibernation sites).
- Giving advice to citizens on conservation of bats.
- Management of the data flow to and in the Environmental Registry (including data from Environmental Board action and outside of state sector)

A selection of responses from EB considering cases involving bats is brought in Annex 2.

## **7. Sites identified and protected which are important to the conservation of bats**

- Ülgase nature reserve (Ülgase looduskaitseala), which is the second biggest hibernation site for bats in Estonia. Came into force in 8.05.2006. the protection rules have been renewed in 2010 (<https://www.riigiteataja.ee/akt/13295112>)

- Species protection Sites in Vääna-Viti, Vääna-Posti and Laagri in Harjumaa County (Nahkhiirte Vääna-Viti, Vääna-Posti ja Laagri püsielupaigad), which are important hibernation sites for bats in Estonia. Came into force in 29.07.2006. Protection rules renewed at 12.04.2010 (<https://www.riigiteataja.ee/akt/13299879>)
- Hanila Species Protection Area in Läänemaa County (nahkhiirte Hanila püsielupaik), which is a Myotis dasycneme maternity colony and Räpina Species Protection Area in Põlvamaa County, which is an important roosting and feeding site for Myotis nattereri, Myotis dasycneme, Myotis daubentonii, Plecotus auritus, Eptesicus nilssonii, Nyctalus noctula in Räpina old park. Came into force in 12.07.2009. Protection rules renewed on 12.04.2010 (<https://www.riigiteataja.ee/akt/13300084>)
- Nature Reserve of the Piusa Caves (Piusa koobastiku looduskaitseala) in Põlvamaa County, which is the most important bat hibernation site in Estonia. Came into force in 7.08.2009. Protection rules renewed in 01.04.2010 (<https://www.riigiteataja.ee/akt/13291236>)
- Rannamõisa landscape reserve, which lists as one of the protection aims also several bat species found in the area. Protection rules came into force in 23.11.2013 (<https://www.riigiteataja.ee/akt/113112013001>)

## **8. Consideration given to habitats which are important to bats**

In recent years it has become more common to **order bat surveys** in connection with planning and development (also EIA-s and SEA-s). However there is a problem with human capacity – there are not enough experts to carry out all needed surveys.

If a bat habitat (can be also a single finding) has been registered in the **Environmental registry**, then all the questions of development and management off these areas have to go through the **Environmental board**. The Environmental Board also sets, when an official bat survey or an expert opinion is needed. (see annex 2)

**Restrictions** have been set also for some public events considering the negative effects on roosting bats in that area

- Eg in 2011, restriction of the use of fireworks during the summer period in Toomemäe park in Tartu.

### **Projects funded by the Environment Investment Fund (KIK)**

- 2010 Removing waste and toxic materials from Humala hibernation site. Environmental Board.
- 2011. Installing information boards to hibernation sites. NGO Suurkõrv. Project cost 752EUR/funded 752EUR
- 2014. Establishing favourable habitat in Kadriorg Park for bats. Tallinn Communal Board. Project cost 59894.04EUR/funded 47915.23EUR
- 2011. Acquiring suitable equipment for monitoring the migration of bats and birds. Environmental Board. Project cost 44350EUR/funded 44350EUR
- 2011. Protected species in Haapsalu area. NGO Sicista arenduskeskus project cost 13933EUR/funded13933EUR
- 2011. Home for bats. Estonian Union for Nature Conservation. Project cost 1559EUR/funded 1599EUR
- 2013. Nature conservation activities in Narva park (including bat boxes). Narva City Government. Project cost 2964EUR/funded 2640EUR

## **9. Activities carried out to promote the awareness of the importance of the conservation of bats**

The dissemination of information about bats is quite active despite the low number of activists. Information is given out via magazines, newspapers, radio programs, in television and during activity days and bat excursions. (see a summary of articles in national and local newspapers in annex 1)

NGO-s active in bat work are:

- **Estonian Fund for Nature** (Bat working group, Lauri Lutsar MSc)
- **NGO Sicista Developmental Centre** (Bat research group, Matti Masing PhD)
- **NGO Suurkõrv** (Active members Triinu Tõrv MSc, Oliver Kalda BSc, Rauno Kalda BSc)

Several other persons are also included in carrying out activities for raising awareness (eg **Kaja Lotman** and **Vello Keppart**). Also the **Stockholm Environment Institute in Estonia** is actively involved in bat conservation.

**International Bat Night** is being celebrated every year all around Estonia (in cooperation with natural history museums, youth activity centres, folk music festival organizers and local activists)

Eg. Estonian Museum for Natural History has organised in 2013 and 2014 a weeklong celebration of bats.

The **email list** for people interested in bats (nahkhiirehuvilised nhh@elfond.ee) is working.

Facebook group has been created by NGO Suurkõrv participants (**Nahkhiiresõbrad**)

### **Projects funded by the Environment Investment Fund**

- 2012. Bat books. NGO Sicista arenduskeskus. Project cost 10678EUR/funded 10678EUR
- 2014. Bats in buildings. Informing public. Estonian Fund for Nature. Project cost 33562EUR/funded 10505EUR

## **10. Responsible bodies, in accordance with Article III.5 of the Agreement, nominated for the provision of advice on bat conservation and management**

Ministry of Environment of the Republic of Estonia, Department of Nature Protection and Environmental Board.

Environmental Agency (monitoring programs)

## **11. Additional action undertaken to safeguard populations of bats**

The Stockholm Environment Institute in Estonia is actively involved in the topic of bats in urban setting.

## **12. Recent ongoing programmes (including research) relating to the conservation and management of bats**

Degrees

- MSc

- Rauno Kalda, magistrikraad, 2012, (juh) Jaan Liira, Riinu Rannap, Puistutega seotud nahkhiirte toitumisaktiivsust ja liigirikkkust mõjutavad faktorid põllumajandus-metsa mosaiikmaastikes, Tartu Ülikool
- Oliver Kalda, magistrikraad, 2013, (juh) Jaan Liira, Riinu Rannap, Nahkhiirte mitmekesisus avatud põllumajandusmaastikes, Tartu Ülikool, Loodus- ja tehnoloogiateaduskond, Tartu Ülikooli Ökoloogia- ja Maateaduste Instituut
- Rennel, L. 2012. Lendorava elupaikade käsitiivalised.  
[https://dspace.emu.ee/bitstream/handle/10492/734/Rennel Liisa MSc MH 2012 kokkuv%C3%B5te.doc.pdf?sequence=1](https://dspace.emu.ee/bitstream/handle/10492/734/Rennel_Liisa_MSc_MH_2012_kokkuv%C3%B5te.doc.pdf?sequence=1)
- PhD
  - Rauno Kalda, doktorant, (juh) Jaan Liira, Landscape ecology of bats, assessment of their indicator value of forest biodiversity and habitat quality (Metsakoosluste elurikkuse ja struktuuri indikaatorrühm põllumajandusmaastikes: nahkhiirte maastikuökoloogia), Tartu Ülikool

#### Publications:

- Liira, Jaan; Lõhmus, Kertu; Kalda, Rauno; Suija, Ave; Jüriado, Inga; Jürjendal, Iti (2012). Biodiversity in Estonian manor parks. Devepark final conference, Alatskivi, Eesti, 29.07.2012. , 2012.
- Kalda, Oliver; Tõrv, Triinu; Kalda, Rauno (2011). Nahkhiirte talvitumine ja kevadine elupaigakasutus Astangul. In: Inimmõju Tallinna keskkonnale VI: InimmõjInimmõju Tallinna keskkonnale VI, Tallinn, 8.detsember 2011.. (Toim.) Meelis Uustal. Tallinn:, 2011, 42 - 46.
- Kalda, Rauno; Kalda, Oliver; Tõrv, Triinu (2011). Nahkhiirte levik ja mitmekesisus Tallinnas. . In: Inimmõju Tallinna keskkonnale VI: InimmõjInimmõju Tallinna keskkonnale VI, Tallinn, 8.detsember 2011.. (Toim.) Meelis Uustal. Tallinn:, 2011, 37 - 41.

#### Programs and projects

- MTÜ Suurkõrv. 2009-2010. Tallinna nahkhiirte uuringud.
- Keskkonnaamet. 2010. Nahkhiirte uuring Vääna-Posti püsielupaigas seoses Paldiski mnt. rekonstrueerimisega.
- Lutsar, L. 2011. Nahkhiirte uuring Kõpu poolsaare lääneosas ja seda ümbritseval merel.
- Eestimaa Looduse Fond. 2012. Narva pimeaias ja bastionites elavate nahkhiirte inventuur.
- Eesti Looduseuurijate Selts 2012. Metsanahkhiirte inventuur.
- Lutsar, L. 2012. Nahkhiirte uuring Uusmadala, Kuradimuna madala ja Tallinna madala piirkonnas 2012. aasta augustis ja septembris.
- Leivits, M. 2008-2010. Edela-Eesti nahkhiirte leviku uuring. – data collection concentrating on *M.daubentonii* and *M.dasycneme*

### **13. Consideration being given to the potential effects of pesticides on bats, and efforts to replace timber treatment chemicals which are highly toxic to bats**

National guidelines have not been created. The EUROBATS guideline is recommended to follow by local experts.

## **D. Functioning of the Agreement**

### **14. Co-operation with other Range States**

Active cooperation and exchange of knowledge between scientists is carried out with Finland and Latvia. Single projects involve experts also from other countries.



Estonia is participating in the Grundtvig LENA 2012-2014 project.  
Estonia was represented in the working group for Action Plan for the Conservation of the Bat Species in the European Union. 2014 - 2020.

## **15. Measures taken to implement Resolutions adopted by Meetings of Parties**

### ***Resolution 2.1 Consistent Monitoring Methodologies.***

A new monitoring project in national environmental monitoring programme under biodiversity and landscapes sub-programme was launched in 2014 on pond bat (*Myotis dasycneme*). It covers 1) annual colony counts in known colonies and 2) point-counts in feeding habitats with new colony searches in a sample over entire state range. The data is used to get more adequate population size and trend estimates as well as distribution and change estimates for the next Habitats Directive report for this species.

More information will be available in the forthcoming Action plan for protection of bats

### ***Resolution 2.4. Transboundary Programme: Habitat Proposals***

Data on important underground sites is submitted to the secretariat.

### ***Resolution 4.3 Guidelines for the protection and Management of Important Underground Habitats***

Underground sites under protection have protection rules and management plan. Other sites do not have general guidelines. The EUROBATS booklet is available in English and recommended to use.

### ***Resolution 4.4 Bat Conservation and Sustainable Forest Management***

An ongoing doctoral thesis involves bats and forested areas.

Rauno Kalda: Landscape ecology of bats, assessment of their indicator value of forest biodiversity and habitat quality, Tartu University

“Nahkhiired metsades”(2005, translated from “Fledermäuse im Wald - Informationen und Empfehlungen für den Waldbewirtschafter” A.Meschede, 2001)

### ***Resolution 4.5 Guidelines for the Use of Remedial Timber Treatment***

No national guidelines for the effect of remedial timber treatment to bats has been created. EUROBATS resolution is reachable from EUROBATS website.

### ***Resolution 4.6 and 5.5 Guidelines for the Issue of Permits for the Capture and Study of captured Wild Bats***

Capturing and study of bats and the permit system is governed by the Environmental Board and is regulated by the Nature Conservation Act and regulation of the Minister of Environment on marking bats and birds.

### ***Resolution 5.2: Bat Rabies in Europe***

Guidelines for preventing Rabies (01.07.2014) mentions bats as one of the possible carriers of the virus and describes a rabid bat, but does not give any further guidelines concerning bats (<https://www.riigiteataja.ee/akt/128062014121>)

No research or active monitoring program of bat rabies has been carried out. However within the national environmental monitoring program, bat rabies is monitored passively. The results of the samples of collected bats within this program have all been negative.

#### **Resolution 5.4: Monitoring Bats across Europe**

Development of wintering bats index in the national environmental monitoring program. With the aim to join the PEMBUS project, annual hibernation counts are carried out in a wider extent.

See p. 26 of the monitoring report. Link to the report:

[http://seire.keskkonnainfo.ee/index.php?option=com\\_content&view=article&id=3148:nahkhiired-2013&catid=1283:eluslooduse-mitmekesisuse-ja-maastike-seire-2013-&Itemid=5762](http://seire.keskkonnainfo.ee/index.php?option=com_content&view=article&id=3148:nahkhiired-2013&catid=1283:eluslooduse-mitmekesisuse-ja-maastike-seire-2013-&Itemid=5762)

#### **Resolution 5.7: Guidelines for the Protection of Overground Roosts, with Particular Reference to Roosts in Buildings of Cultural Heritage Importance**

The Stockholm Environment Institute in Estonia is actively involved in the topic of bats in settlements.

Estonian Fund for Nature started from 2014 for giving advice to the people

The guidelines have not been translated into Estonian, although they are available in English if needed and recommended by experts.

#### **Resolution 6.6: Guidelines for the Prevention, Detection and Control of Lethal Fungal Infections in Bats**

Bat workers are generally informed about the fungal infections. The sample kit from Dr. Puechemaille is available but no samples have been taken yet. There has been one positive case of *P.destructans* in Estonia in 2010 (the bat was found from Laagri hibernaculum)

#### **Resolution 6.7: Conservation and management of critical feeding areas, core areas around colonies and commuting routes**

Recommendations and guidelines are given in specific survey reports and expert opinions, but no general guidelines are available for the public in Estonian.

#### **Resolution 6.8: Monitoring daily and seasonal movements of bats**

Within the national environmental monitoring programme, automatic bat counts are made on important migration routes since 2008. Summaries for Kabli survey point can be found from the report of 2013. From 2013, surveys in new locations are set-up, to collect new data on possible migration routes and monitor the timing of migration of different migratory bat species.

Link to the report:

[http://seire.keskkonnainfo.ee/index.php?option=com\\_content&view=article&id=3148:nahkhiired-2013&catid=1283:eluslooduse-mitmekesisuse-ja-maastike-seire-2013-&Itemid=5762](http://seire.keskkonnainfo.ee/index.php?option=com_content&view=article&id=3148:nahkhiired-2013&catid=1283:eluslooduse-mitmekesisuse-ja-maastike-seire-2013-&Itemid=5762)

and to the Kabli bird station website:

[http://kabli.nigula.ee/index.php?option=com\\_seire&view=seirechi&Itemid=27](http://kabli.nigula.ee/index.php?option=com_seire&view=seirechi&Itemid=27)

Program is led by M.Leivits.

#### **Resolution 6.11: Wind turbines and bat populations (Repeals Resolution 4.7: Wind Turbines and bat Populations; Resolution 5.6: Wind Turbines and Bat Populations: guidelines for the planning process and impact assessments)**

Guidelines in Estonian are not available, but the general guidelines provided by EUROBATS have been taken into account and recommended by local experts. The knowledge is increasing and there is a need to include bat surveys in EIA and SEA process connected with wind parks. But there is lack of human capacity to carry out all needed surveys.

***Resolution 6.9: Year of the Bat***

During “Year of the Bat “2011-2012 many activities were carried out led mainly by the NGO-s previously mentioned.

Main attractions being the bat evenings carried out in Tallinn, Tartu and Matsalu, but there were several smaller events all over Estonia and also some increased press coverage.

## ANNEX 1

### Articles in local magazines, newspapers and other news outlets 2010-2014:

#### Eesti Loodus

- 12.2012 Nahkhiired on Eestis kaitse all. T.Tõrv
- 1.2013 Nahkhiired Alutaguse lendoravametsas. L.Rennel

#### Sakala

- 21.01.2010 <http://www.sakala.ajaleht.ee/215008/pohja-nahkhiir-kulmus-keeltpidi-aida-aknapleki-kulge-kinni>
- 08.03.2010 <http://www.sakala.ajaleht.ee/223150/uuringud-toid-valja-viljandi-loodusliku-rikkuse>
- 20.03.2011 <http://www.sakala.ajaleht.ee/405533/nahkhiir-poonab-kortermaja-koridoris>
- 30.07.2011 <http://www.sakala.ajaleht.ee/514452/keskoine-kulaline-pani-viljandlase-pead-murdma>
- 25.09.2012 <http://www.sakala.ajaleht.ee/984666/nahkhiired-saavad-koridorides-tiibu-sirutada>
- 14.06.2014 <http://www.sakala.ajaleht.ee/2827613/pugmee-nahkhiired-lahevad-kaitse-alla>
- 16.08.2012 <http://pluss.sakala.ajaleht.ee/941002/oo-on-vaikne-kuid-uhtlasi-kararikas>

#### ilmajaam.ee

- 04.12.2010 <http://ilmajaam.postimees.ee/352300/postimehe-rodude-eksinud-nahkhiir-teeb-ajalugu>
- 05.12.2010 <http://ilmajaam.postimees.ee/352468/galerii-uuriija-otsis-peitu-pugenud-nahkhiirt>
- 29.09.2011 <http://ilmajaam.postimees.ee/581606/galerii-nahkhiir-eksis-tallinna-vanalinna-poeaknale>

#### Tartu Postimees

- 23. aprill 2010 <http://tartu.postimees.ee/254125/ihaste-sundis-looduseihalusel>
- 21. märts 2011 <http://tartu.postimees.ee/405777/unimutsidel-tuleb-peagi-arevus-sisse>
- 25. november 2013 <http://tartu.postimees.ee/2608430/salaparane-tiivuline-talvitub-linnas>

#### Tallinncity.postimees.ee

- 03.12.2010 <http://tallinncity.postimees.ee/351869/postimehe-toimetuse-rodult-leiti-nahkhiir>

#### Pärnu postimees

- 08.10.2010 <http://pluss.parnupostimees.ee/323642/oine-valgustus-ja->

#### Järva Teataja

- 12.03.2011 Nahkhiir vahetas laka elutoa vastu
- 25.08.2012 <http://pluss.jt.ee/950120/nahkhiir-jagab-elupaika-inimesega-teda-rundamata>

#### Elu24

- 25. august 2011 <http://elu24.postimees.ee/540962/nahkhiired-ajasid-naised-korterist-valja>

#### Postimees

- 23. november 2011 <http://www.postimees.ee/643526/kohtla-jarvel-laks-nahkhiir-lasteaeda>
- 29. veebruar 2012 <http://www.postimees.ee/755982/nahkhiir-narrib-heimtalis-hobusekasvatajaid>
- 05.05.2012 Nahkhiired igasse aeda!
- 07. mai 2013 <http://www.postimees.ee/2785638/mers-viirus-ohustab-miljoneid-palverandureid>

#### Tarbija 24

- 11. jaanuar 2012 <http://tarbija24.postimees.ee/699438/loomahammustusi-jaab-aastatega-aina-vahemaks>
- 26. juuni 2013 <http://tarbija24.postimees.ee/1281414/putukateadlane-eestis-voiks-saaski-peletada-nahkhiire-haale-imitatsiooniga>

#### Virumaa teataja

- <http://pluss.virumaateataja.ee/945308/augustioo-on-vaikne-kuid-uhtlasi-kararikas>
- 20.09.2012 <http://pluss.virumaateataja.ee/978458/palmses-raagitakse-nahkhiirtest>
- 05.10.2012 <http://pluss.virumaateataja.ee/995756/nahkhiir-idamaades-onnesumbol-eestis-tekitab-hirmu>

#### Eesti Päevaleht

- 08. märts 2010 <http://epl.delfi.ee/news/eesti/alatskivi-lossi-nahkhiirekelder-tehakse-korda.d?id=51192928>
- 18. august 2010 <http://epl.delfi.ee/news/eesti/mida-pakkuda-ootamatule-kulalisele.d?id=51281302>

- 06. detsember 2010 <http://epl.delfi.ee/news/eesti/piki-liivi-lahe-rannikut-kulgeb-nahkhiirte-randete.d?id=51287895>
- 25.07.2011 <http://epl.delfi.ee/news/eesti/juuli-neljas-nadal-liblikate-roomupidu.d?id=51300372>
- 21. veebruar 2014 <http://epl.delfi.ee/news/eesti/kadrioru-pargis-elutsevad-nahkhiired-kolivad-uutesse-munitsipaalkorteritesse.d?id=68073359>
- 31. märts 2014 <http://www.delfi.ee/news/paevauudised/eesti/loodusefond-talveune-hairimine-tapab-nahkhiired.d?id=68344187>

#### Maaleht

- 13. august 2010 <http://maaleht.delfi.ee/news/uudised/meelelahutus/vallavanem-vaatles-toas-nahkhiirt.d?id=32587633>
- 22. september <http://maaleht.delfi.ee/news/loodus/loodusuudised/ulevalgustatud-maanteed-ja-pargid-hairivad-nahkhiiri.d?id=33312389>
- 13. veebruar 2011 <http://maaleht.delfi.ee/news/uudised/meelelahutus/pikim-keel-ulatub-10-cm-suust-valja.d?id=40142152>
- 14. september 2011 <http://maaleht.delfi.ee/news/loodus/loodusuudised/linnuvaatleja-markas-sorves-haruldast-kaabus-nahkhiirt.d?id=57732494>
- 06. detsember 2011 <http://maaleht.delfi.ee/news/loodus/loodusuudised/haapsalus-lendasid-uksikud-nahkhiired-ringi-veel-novembri-algul.d?id=62839628>
- 04. veebruar 2012 <http://maaleht.delfi.ee/news/loodus/loodusuudised/nahkhiired-ja-inimene-kogemused-seoses-hairimisfaktoriga.d?id=63869328>
- 19. juuli 2012 <http://maaleht.delfi.ee/news/uudised/eestiudised/majaomaniku-ullatus-200-nahkhiirt-pooningul.d?id=64691708>
- 28. märts 2013 <http://maaleht.delfi.ee/news/loodus/loodusuudised/narva-nahkhiired-saavad-endale-ued-suvilad.d?id=65890744>
- 11. aprill 2013 <http://maaleht.delfi.ee/news/uudised/eestiudised/kas-loodus-on-ikka-nii-ohklik-kui-arvatakse.d?id=65954574>
- 30. oktoober 2013 <http://maaleht.delfi.ee/news/loodus/loodusuudised/uurijad-kinnitavad-tartus-on-tanavu-massiliselt-muidu-siinkandis-haruldasi-hobe-nahkhiiri.d?id=67003908>
- november 2013 <http://maaleht.delfi.ee/news/uudised/eestiudised/keskkonnaminister-esitas-valitsusele-rannamoisa-klindi-kaitse-eeskirja.d?id=67017666>
- 04. aprill 2014 <http://maaleht.delfi.ee/news/uudised/elu/loodusmuuseumi-avastuste-ruum-avab-ukse-loomade-maailma.d?id=68376415>

#### Delfi

- 28. november 2013 <http://eesti.elu.delfi.ee/eesti/ida-virumaa/narva/elu/narvas-paigaldati-nahkhiirtele-salasuvilad.d?id=67340810>
- 14. juuni 2014 <http://www.delfi.ee/news/paevauudised/eesti/pugmee-nahkhiired-saavad-eestis-kaitse-alla.d?id=68878919>
- 04. august 2010 [http://www.delfi.ee/news/paevauudised/110\\_112/nahkhiir-sattus-eksikombel-korterisse.d?id=32440927](http://www.delfi.ee/news/paevauudised/110_112/nahkhiir-sattus-eksikombel-korterisse.d?id=32440927)
- 06. august 2010 [http://www.delfi.ee/news/paevauudised/110\\_112/paastjad-aitasid-kahte-lindu-ja-uhte-nahkhiirt.d?id=32477947](http://www.delfi.ee/news/paevauudised/110_112/paastjad-aitasid-kahte-lindu-ja-uhte-nahkhiirt.d?id=32477947)
- 18. august 2010 [http://www.delfi.ee/news/paevauudised/110\\_112/nahkhiir-tuli-suitsulembestele-ajakirjanikele-kulla.d?id=32650219](http://www.delfi.ee/news/paevauudised/110_112/nahkhiir-tuli-suitsulembestele-ajakirjanikele-kulla.d?id=32650219)
- 23. november 2011 [http://www.delfi.ee/news/paevauudised/110\\_112/lasteaiast-ei-paasunud-nahkhiir-valja.d?id=62067018](http://www.delfi.ee/news/paevauudised/110_112/lasteaiast-ei-paasunud-nahkhiir-valja.d?id=62067018)
- 04. detsember 2011 <http://www.delfi.ee/news/paevauudised/valismaa/marutobised-nahkhiired-on-ecuadoris-tapnud-vahemalt-kaheksa-last.d?id=62706014>
- 11. jaanuar 2012 <http://www.delfi.ee/news/paevauudised/eesti/mullu-rundasid-loomad-1771-inimest-rundajate-seas-olid-kobras-nahkhiir-ja-koaati.d?id=63763728>
- 06. aprill 2012 <http://www.delfi.ee/news/paevauudised/eesti/kuressaares-toimuvad-nahkhiiretalgud.d?id=64213459>
- 10. juuni 2014 <http://www.delfi.ee/news/paevauudised/eesti/kadrioru-parki-rajatakse-nahkhiirtele-sobiv-valgustus.d?id=68848405>

#### Täheke

- 16. aprill 2013 <http://taheke.delfi.ee/taheke/miskeskus/loodusmuuseumis-on-avatud-ponev-naitus-eesti-looduse-ohitudest.d?id=65968526>

- 04. aprill 2014 <http://taheke.delfi.ee/taheke/miskeskus/avasta-loodusmuuseumis-mida-naeb-karbes-ja-kuidas-madu-ohku-maitseb.d?id=68359113>

#### Forte

- 25. jaanuar 2011 <http://forte.delfi.ee/news/teadus/kuumahirm-tegi-nahkhiired-ooloomadeks.d?id=39048683>
- 16. november 2011 <http://forte.delfi.ee/news/teadus/nahkhiir-muudab-korva-kuju-silmapiikselt.d?id=61671182>
- 14. juuni 2012 <http://forte.delfi.ee/news/teadus/loomad-selgitavad-teadlastele-tervise-ja-pika-eluea-saladusi.d?id=64539196>
- 17. juuni 2012 <http://forte.delfi.ee/news/teadus/vampiirnahkhiired-levitavad-louna-ameerikas-marutaudi-ja-nende-havitamine-ei-aita.d?id=64551792>
- 04. jaanuar 2013 <http://forte.delfi.ee/news/varia/haiguste-paritolu-me-koik-oleme-nagu-kondivad-bioloogilised-relvad.d?id=65487138>
- 21. märts 2013 <http://forte.delfi.ee/news/varia/kulmana-veniv-kevad-on-siilide-ja-unilaste-jaoks-tappev.d?id=65853502>
- 09. mai 2013 <http://forte.delfi.ee/news/varia/ja-parima-kuulmisega-on-mesilastarudes-elav-kahjur-nimega-suur-karjeleedik.d?id=66098474>

#### Rahva Hääl

- 27. juuli 2010 <http://rahvahaal.delfi.ee/news/uudised/video-nahkhiir-laks-perenaise-kaktuse-kallale-maiustama.d?id=32317953>
- 29. august 2012 <http://rahvahaal.delfi.ee/news/uudised/foto-nahkhiired-lendavad-ringi-ohthamaruses.d?id=64888534>
- 27. august 2013 <http://rahvahaal.delfi.ee/news/uudised/fotod-nahkhiired-seiklevad-maja-umber.d?id=66642737>
- 04. august 2014 <http://rahvahaal.delfi.ee/news/pildid/fotod-nahkhiir-magab-paevaund-nagu-kassipoeg.d?id=69477617>
- 12. august 2014 <http://rahvahaal.delfi.ee/news/pildid/fotod-augusti-ohthamaruses-seiklevad-maja-umber-taas-nahkhiired.d?id=69522001>

#### Eesti elu

- 13. august 2012 <http://eestielu.delfi.ee/eesti/harjumaa/keila/elu/fotod-keila-joepark-on-koduks-suurimale-eestis-elavale-nahkhiireliigile.d?id=64814104>

#### Publik

- 07. veebruar 2013 <http://publik.delfi.ee/news/videod/video-saatana-sigitised-vaevalt-kull-vaata-kuidas-nahkhiirebeebid-lutipudelist-soovad.d?id=65643366>

#### Noorte Hääl

- 16. veebruar 2014 <http://noortehaal.delfi.ee/news/elu/usa-s-leiti-korterist-200-nahkhiirt.d?id=67958781>

#### meiema.ee

- 17. oktoober 2013 <https://www.meiema.ee/index.php?content=artiklid&sub=35&artid=55582&term=nahkhiir>
- 13. september 2013 <https://www.meiema.ee/index.php?content=artiklid&sub=54&artid=55020&term=nahkhiir>
- 30. august 2013 <https://www.meiema.ee/index.php?content=artiklid&sub=54&artid=54796&term=nahkhiir>
- 07. mai 2012 <https://www.meiema.ee/index.php?content=artiklid&sub=1&artid=47721&term=nahkhiir>
- 18. august 2010 <https://www.meiema.ee/index.php?content=artiklid&sub=3&artid=37923&term=nahkhiir>
- 13. august 2010 <https://www.meiema.ee/index.php?content=artiklid&sub=1&artid=37823&term=nahkhiir>
- 14. juuli 2010 <https://www.meiema.ee/index.php?content=artiklid&sub=1&artid=37324&term=nahkhiir>
- 29. märts 2010 <https://www.meiema.ee/index.php?content=artiklid&sub=1&artid=35328&term=nahkhiir>

#### Teadus.err.ee

- 15.11.2011 <http://teadus.err.ee/v/loodus/2c462f8a-3cec-4606-8607-935360215ba0>
- 20.06.2013 <http://teadus.err.ee/v/teaduslugu/f3339cf8-2044-4489-9a15-5083b5999b5b>

- 12.03.2011 <http://uudised.err.ee/v/varia/004e409c-d9f0-4079-ad5f-fb20ae3247b0>
- 19.09.2013 <http://uudised.err.ee/v/varia/0e56d76e-085f-46be-99b9-6c8de95488da>
- 26.12.2013 <http://uudised.err.ee/v/eesti/0aa5e420-590e-46ea-b7d9-bbc8be858f77>
- 21.02.2014 <http://uudised.err.ee/v/eesti/064f5079-7b37-4a41-94d8-4aa57b13cc5e>

#### Põhjarannik

- 8. mai 2014 <http://pr.pohjarannik.ee/?p=10381>
- aprill 2014 <http://pr.pohjarannik.ee/?p=10138>
- aprill 2014 <http://pr.pohjarannik.ee/?p=10131>
- 27. november 2013 <http://pr.pohjarannik.ee/?p=9200> ‘

## ANNEX 2

### Selection of cases connected with the conservation of bats through the Environmental Board (EB)

| <b>Topic, response from the Environmental Board</b>                                                                                                                                                                                                                                                                                                                                                                                                     | <b>year</b> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Advice given on how to reach survey results (2005) from Vooremaa region                                                                                                                                                                                                                                                                                                                                                                                 | 2009        |
| Advice given considering bats flying around in a building in Narva, reminding that's bats are protected species                                                                                                                                                                                                                                                                                                                                         | 2009        |
| Accepting the research goal application or the Vääna-Posti hibernaculum.                                                                                                                                                                                                                                                                                                                                                                                | 2009        |
| Not accepting the renovating project of Vihula manor cellars due to the projects not taking bat conservation into consideration                                                                                                                                                                                                                                                                                                                         | 2009        |
| Permit to carry out a survey given to NGO Suurkõrv in Laagri, Vääna-Posti, Vääna-Viti and Humala Hibernaculæ.                                                                                                                                                                                                                                                                                                                                           | 2009        |
| Reconstruction of Narva fortifications.<br>Recommendation was given for the developers of Narva City fortification renovation Works to obtain a bat expert opinion and a survey for the Project.                                                                                                                                                                                                                                                        | 2009        |
| Tõstamaa park<br>EB recommends not to change the lighting in the park and expresses concern, that the intended amount of felling of trees will affect negatively the habitat of bats. Whereas the sanitary cut in Tõstamaa park is not allowed.                                                                                                                                                                                                         | 2009        |
| Question of land ownership change in Haimre park area.<br>EB gives recommendations of what has to be taken into account within Haimre park territory to ensure conservation of the bat habitat.                                                                                                                                                                                                                                                         | 2009        |
| Giving recommendations for management of forested areas (favourably to bats) during planning.                                                                                                                                                                                                                                                                                                                                                           | 2010        |
| EB answered to the question, that a permit is not needed for catching bats (or taking dna samples) if bats are not ringed or otherwise marked.                                                                                                                                                                                                                                                                                                          | 2010        |
| EB gave information on a tunnel connected to the Laagri hibernaculum and referred to the protection rules of the Laagri hibernaculum.                                                                                                                                                                                                                                                                                                                   | 2010        |
| Correction to a development plan, where bats are mentioned Under the paragraph of birds.                                                                                                                                                                                                                                                                                                                                                                | 2010        |
| Accepting the expert opinion on the development of development plan in Kunda City on bats.                                                                                                                                                                                                                                                                                                                                                              | 2010        |
| Accept and carry out a Project to clean Humala hibernaculum from dangerous waste.                                                                                                                                                                                                                                                                                                                                                                       | 2010        |
| Answer to a question for real estate development<br>EB recommends the owner to follow the Environment Conservation Act and European documents, where it is prohibited to damage or destroy bat habitats.                                                                                                                                                                                                                                                | 2010        |
| EB coordinates the renovation Project of Narva fortification walls. Reminding that the habitat is used by protected species: bats.                                                                                                                                                                                                                                                                                                                      | 2010        |
| Approving the EIA for Narva old town general plan.<br>Setting a condition that bat surveys are necessary.                                                                                                                                                                                                                                                                                                                                               | 2011        |
| Mentioning bats in setting conditions to pyrotechnic use in green areas in Tartu.                                                                                                                                                                                                                                                                                                                                                                       | 2011        |
| EB answer to the request to cut two old trees in Oru Park.<br>Negative response since it is not dangerous to humans (recommends to consult a specialist arborist) and provides good habitat for wildlife and is essential to the park.                                                                                                                                                                                                                  | 2011        |
| EB expressed its opinion for a Project proposal KESTA „urban nature and humans“. EB supported the project emphasising the importance of sustaining biodiversity and informing the public.                                                                                                                                                                                                                                                               | 2011        |
| Informing about a bat roost in a building in Rakvere, Oru street.<br>EB informs about a bat roost in a cellar, reminding that bats are protected species. And gives further advice, such as: a mosquito net prevents bats from entering Windows; net can also help to keep bats out of ventilation systems (reminding that such thing can be done only in autumn or winter).<br>EB also insures that bats are not dangerous, but rather useful animals. | 2011        |
| Accepting the EIA report for Aseri wind park.<br>EB added that there is a need to carry out bat surveys at least two years after the building of the generators: both detector survey and searching for dead bats are necessary.                                                                                                                                                                                                                        | 2011        |
| EB opinion to the initial task for the public procurement for carrying out a bat survey in Narva Pimeaed Park and bastions.<br>EB commented, that the tasks have to be reworded taking into consideration timing and deadlines suitable for bats (it is impossible to do summer roost survey in the winter etc)                                                                                                                                         | 2011        |
| Answer to RMK (state forest management centre): it is necessary to let the land owner know about the location of the catching site/constructions (but not for bats).                                                                                                                                                                                                                                                                                    | 2011        |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| <p>Answer to Land Board concerning privatizing land in the area of Alatskivi park.<br/>EB considers the privatizing not to be reasonable because of the restrictions on the land due to the protection rules of the protected area.<br/>Bats are also mentioned. Since the land in question is so small, it is not viable for the bats.</p>                                                                                                                                                                                                                                                                     | 2012 |
| <p>Opinion for the maintenance project for Pürksi park.<br/>During compiling the Project and executing it the conservation of bats must be ensured. EB gives advice on habitat requirements for bats in parks, including timing of felling of trees, lighting etc.<br/>EB gives permission to the maintenance Project in case all of the requirements concerning bat are fulfilled.</p>                                                                                                                                                                                                                         | 2012 |
| <p>Application for a permit to carry out a survey in Vääna-Posti hibernaculum<br/>EB decided to give permits to M.Masing and L.Lutsar.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2012 |
| <p>Application for a permit to carry out a survey in Piusa hibernaculum.<br/>Permit was given by EB to M.Masing, L.Lutsar, R.Kalda and O.Kalda.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2012 |
| <p>Opinion for the SEA program Project in Kõrgessaare parish. EB asks to add a topic of impact assessment on protected species (including bats)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2012 |
| <p>EB does not approve a detailed plan in Tartu City.<br/>EB also points out, that bats are not included in the SEA report. Detailed plan includes a river which is marked as a foraging habitat for bats in EELIS. It need to be cleared which times of building activity influence bats the least and is clearing the banks of bushes would influence bats negatively.</p>                                                                                                                                                                                                                                    | 2012 |
| <p>Application for marking permit for bats.<br/>EB answer: the form for the application is not yet approved, but EB provides questions for the applicant to be answered.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2012 |
| <p>Application for felling trees and clearing form bushes in Inju manor park.<br/>EB allows to fell marked trees in the park, but reminds that parks are important habitat for bats and they have certain habitat requirements.</p>                                                                                                                                                                                                                                                                                                                                                                             | 2012 |
| <p>Information on a bat sighting.<br/>EB enters the sighting into EELIS.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2012 |
| <p>Information on a found dead bat.<br/>EB recommends to ask L.Lutsar if he would be interested in the remains.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2012 |
| <p>Inquire on the approving of reconstruction work in an old plant in Toila parish.<br/>EB answer: According to EELIS the land is a habitat for several species of bats. EB turns attention to the expert opinion of L.Lutsar for the area in question, where he recommends further surveys on bats. EB allows the Project to proceed having visited the area themselves taking into account the old park as a favourable habitat for bats near to the construction area. Construction cannot be carried out in June-July and if any bats are found during work, immediate contact with EB has to be taken.</p> | 2012 |
| <p>Inquiry on what to do with a bat found inside in late autumn.<br/>EB answer: do not take the bat outside in this cold weather. If possible transfer the bat into a ground cellar. Please do not handle the bat without gloves as it might bite. In case of any trouble, please contact EB.</p>                                                                                                                                                                                                                                                                                                               | 2012 |
| <p>Recommendation on felling trees in forest.<br/>EB comments on forest notification for carrying out clear cutting on Registered immovable (Kõometsa).<br/>EB points out there is a bat habitat on the immovable according to EELIS. It is recommended to avoid regeneration cutting from May to August. It is recommended to leave groups of old, injured and cavity rich aspens.</p>                                                                                                                                                                                                                         | 2012 |
| <p>The EIA forward estimate concerning the permit for special use of water during bank protection in reconstruction of Tartu kaarsild bridge.<br/>EB comment: According to EELIS the area is a bat habitat. The work is not allowed during late hours and it is forbidden to destroy bat habitat (trees with cavities)</p>                                                                                                                                                                                                                                                                                      | 2013 |
| <p>Cutting application in Narva Pimeaed park<br/>Although there was a permission from EB for the cutting from year 2008, EB visited the park with bat expert L.Lutsar and decided to deny the permission for trees suitable for bat roosts. EB further points out how bat habitat should be taken into consideration (including felling dangerous trees bat friendly in stages, maintaining woodland structure etc.) in park management. In addition EB requests for the owner to cooperate with bat experts in choosing a suitable lighting option.</p>                                                        | 2013 |
| <p>Application to visit Piusa caves to carry out monitoring of bats.<br/>EB grants a permit to carry out the survey to NGO Siciستا Arenduskeskus: M.Masing, L.Lutsar, R.Kalda, O.Kalda and A.Ader.</p>                                                                                                                                                                                                                                                                                                                                                                                                          | 2013 |
| <p>Application to cut trees near Nõuni school.<br/>It is described, why trees in the water protection zone are necessary (including as a habitat for bats).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2013 |

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| EB representatives visited the area and this resulted in not allowing the cutting of some trees and advice how to make minimum disturbance to the environment and setting a deadline for the Works.                                                                                                                                                                                                                                                                                                                                |      |
| The application to cut one tree in Oru park<br>As Oru park is marked as a bat habitat, it is necessary to make sure there are no bats in the tree. If there are bats in the tree, it is recommended to cut the tree on a cloudy weather or in the evening so that the bats can fly away.                                                                                                                                                                                                                                           | 2013 |
| Remarks by the EB to the maintenance plan for Vana-Vigala park.<br>The method of finding nursery colony roosts in trees is not used as a bat inventory method. It is marked, that the park area is used as a feeding and roosting area for bats and it is necessary to preserve all old trees with cavities during maintenance Works.                                                                                                                                                                                              | 2013 |
| EB opinion to the EIA of Põrgukese detailed plan<br>According to the EELIS (environment info system) 4 species have been found in the area. Referring to that an evaluation of the effect of the planning to the bats must be carried out.<br>EB explains the conservation status of bats and their habitats. EB does not agree with the argument that considering the bats have used private houses in the green corridor as a suitable habitat before, therefore it should be allowed to build new houses to the green corridor. | 2013 |
| Tartu City government wishes to stop the process of defining the borders of Toomemäe park.<br>EB emphasizes the need to have green spaces in City environment to reduce heat island effect and the importance of the system of green spaces to wildlife (including bats). EB says all the City centre green spaces have high environmental protection value.                                                                                                                                                                       | 2013 |
| Opinion to a cutting application of trees in Pädaste manor park.<br>EB agrees to the maintenance plan of the Pädaste park. Works have to be carried out during Nov-March.                                                                                                                                                                                                                                                                                                                                                          | 2013 |
| Opinion to EIA program for Männiku sand quarry. EB points out that it is compulsory to get also an expert opinion from a bat expert on how does the action planned effect bats.                                                                                                                                                                                                                                                                                                                                                    | 2013 |
| Answer to the application to cut single trees in Pädaste park.<br>EB agrees to cutting 15 trees from the avenue as well as removing dangerous branches above the road. Works need to be done during Nov-March.                                                                                                                                                                                                                                                                                                                     | 2013 |
| Coordination of 3 estates in Alatskivi.<br>According to the environmental register, there is a daubentons bat feeding habitat. Therefore any cutting of trees cannot be carried out during the summer.                                                                                                                                                                                                                                                                                                                             | 2013 |
| Annex to a forest notification for Tagametsa real estate. EB turns attention to the daubentons bat findings in the Env. Register. EB further advises not to cut trees from 1. May to 31 July.                                                                                                                                                                                                                                                                                                                                      | 2013 |
| Not accepting the EIA report of Kirikulahe and Kümnaaugu properties referring to:<br>The report does not have information on bat feeding areas (Env.registry has findings of three species). Report should also have the analysis of the lighting solutions. EB further gives information on the possible negative effects of light pollution on bats.                                                                                                                                                                             | 2013 |
| Land Board requests information concerning privatizing land in Haapsalu City.<br>The land in question has findings of 3 species of bats in the registry, but since it is not formed as a protected area, no special requirements hold. EB recommends to take bats into account when designing lighting solutions.                                                                                                                                                                                                                  | 2014 |
| EB decided to support a Project of Kurgja-Linnutaja park reconstruction if a dendrological analyse is done to the trees and trees valuable for bats are not cut down.                                                                                                                                                                                                                                                                                                                                                              | 2014 |
| A negative response to cutting 5 trees in the water protection zone around Pühajärve lake referring to the trees being important for wildlife (including bats)                                                                                                                                                                                                                                                                                                                                                                     | 2014 |
| A negative response to cutting 5 trees in the water protection zone around Nõuni lake referring to the trees being important for wildlife (including bats)                                                                                                                                                                                                                                                                                                                                                                         | 2014 |
| EB granted a permission to go to the protected hibernaculum for wintering counts to M.Masing, R.Kalda, O.Kalda, L.Lutsar in Vääna-Posti, Vääna-Viti, Laagri and Ülgase hibernaculum 25.02-15.03.2014                                                                                                                                                                                                                                                                                                                               | 2014 |
| Request to start the building work in Narva Viktoria bastions earlier than planned.<br>EB refers to the nature conservation act and to bats being II category species. Due to weather conditions (snow) EB does not allow earlier start of the Works. 13.03 the site was inspected and the Works were asked to stop. 17.03 the Works were still ongoing. Environmental inspectorate was informed of the issue.                                                                                                                     | 2014 |
| The request to build a floating dock in Haapsalu city<br>EB stresses that bats are sensitive to light pollution. Care has to be taken, that the lighting will take bats into consideration.                                                                                                                                                                                                                                                                                                                                        | 2014 |