



LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG
Administration des eaux et forêts

Direction



Grand-Duchy of Luxembourg

EUROBATS
5th Session of the Meeting of Parties
4-6 September 2006, Ljubljana, Slovenia

LUXEMBOURG
National Report on the Implementation on the
'European Bat Agreement'

Compilers of Report: Jacques B. Pir / Laurent BIRASCHI

August 2006

A. General information

Name of the Party: Grand-Duchy of Luxembourg

Date of Report: 10th August 2006

Period Covered: May 2003-May 2006

Competent Authority:

Administrative Focal Point :
Administration des Eaux et Forêts
Direction/ Service Conservation de la Nature
Monsieur Laurent BIRASCHI / Dr. Laurent SCHLEY
16, rue Eugène Ruppert
L - 2453 Luxembourg
Tel (+) 352 / 402201-1
Fax: (+) 352 / 402201-250
e-mail: laurent.biraschi@ef.etat.lu
laurent.schley@ef.etat.lu

Scientific Focal Point:
National Museum of Natural History
Mme Edmée ENGEL / Monsieur Jacques B. PIR
25, rue Münster
L - 2160 Luxembourg
Tel (+)352 / 462233-414
Fax (+)352 / 475152
e-mail: jacques.pir@education.lu
eengel@mnhn.lu

B. Status of bats within the territory of the Party

B.1. Summary details of resident species

At this stage, 19 bat species have been recorded in Luxembourg. One species *Rhinolophus hipposideros* has unfortunately to be declared extinct. This leaves the current number of bat species in Luxembourg at 18.

species	National red list status (cat.:)	number of known summer roosts	number of known winter roosts
1. <i>Rhinolophus ferrumequinum</i>	1	1	18
2. <i>Rhinolophus hipposideros</i>	0	--	--
3. <i>Barbastella barbastellus</i>	1	--	1
4. <i>Eptesicus nilssonii</i>	DD	(1)	0
5. <i>Eptesicus serotinus</i>	3	>16	9
6. <i>Myotis bechsteinii</i>	2	12	10
7. <i>Myotis brandtii</i>	1	(1)	57*
8. <i>Myotis daubentonii</i>	3	0	17

Species (continued)	National red list status (cat.:)	number of known summer roosts	number of known winter roosts
9. <i>Myotis emarginatus</i>	1	9	4
10. <i>Myotis myotis</i>	2	13	34
11. <i>Myotis mystacinus</i>	2	1(2)	57*
12. <i>Myotis nattereri</i>	2	3	3
13. <i>Nyctalus leisleri</i>	3	2	0
14. <i>Nyctalus noctula</i>	2	0	3
15. <i>Pipistrellus nathusii</i>	DD	0	0
16. <i>Pipistrellus pipistrellus</i>	V	>50	3
17. <i>Plecotus auritus</i>	3	6	11
18. <i>Plecotus austriacus</i>	2	14	11
19. <i>Vespertilio murinus</i>	DD	0	0

Categories.:

0 => extinct; 1 => threatened by extinction; 2 => highly threatened; 3 => threatened; V => near threatened; DD => data deficiency

* no discrimination of *Myotis mystacinus/brandtii* were made during winter census

The atlas on the distribution of bats in Luxembourg has been published:

Harbusch, C.; E. Engel & J.B. Pir (2002) Die Fledermäuse Luxemburgs (Mammalia: Chiroptera). – Ferrantia 33: 149 pp. (ISSN 1682-5519)

The atlas on the distribution of bats in Luxembourg has been published and presents winter and summer distribution maps for each species in Luxembourg. A summary for each species in French and English is closing each chapter. The atlas can be obtained at ferrantia@mnhn.lu or downloaded directly as a PDF-file at <http://www.mnhn.lu/recherche/ferrantia/publications/Ferrantia33.pdf>.

B. 2. Status and Trends

For the status of species: see also the atlas above.

Red List of bat species in Luxembourg

Family Rhinolophidae

Rhinolophus

1. *Rhinolophus ferrumequinum* (SCHREBER, 1774); Cat.: 1: Threatened by extinction
2. *Rhinolophus hipposideros* (BECHSTEIN, 1800); Cat.: 0: Extinct

Family Vespertilionidae

Barbastella

3. *Barbastella barbastellus* (SCHREBER, 1774); Cat.: 1: Threatened by extinction

Eptesicus

4. *Eptesicus nilssonii* (KEYSERLING & BLASIUS, 1839); Data deficiency
5. *Eptesicus serotinus* (SCHREBER, 1774); Cat.: 3: Threatened

Myotis

6. *Myotis bechsteinii* (KUHL, 1817); Cat.: 2: Highly threatened
7. *Myotis brandtii* (EVERSMANN, 1845); Cat.: 1: Threatened by extinction
8. *Myotis daubentonii* (KUHL, 1819); Cat.: 3: Threatened
9. *Myotis emarginatus* (GEOFFREY, 1806); Cat.: 1: Threatened by extinction
10. *Myotis myotis* (BORKHAUSEN, 1797); Cat.: 2: Highly threatened
11. *Myotis mystacinus* (KUHL, 1817)); Cat.: 2: Highly threatened
12. *Myotis nattereri* (KUHL, 1817)); Cat.: 2: Highly threatened

Nyctalus

13. *Nyctalus leisleri* (KUHL, 1817); Cat.: 3: Threatened
14. *Nyctalus noctula* (SCHREBER, 1774); Cat.: 2: Highly threatened

Pipistrellus

15. *Pipistrellus nathusii* (KEYSERLING & BLASIUS, 1839); Data deficiency
16. *Pipistrellus pipistrellus* (SCHREBER, 1774); Cat. V : Potentially endangered

Plecotus

17. *Plecotus auritus* (LINNAEUS, 1758); Cat.: 3: Threatened
18. *Plecotus austriacus* (FISCHER, 1829); Cat.: 2: Highly threatened

Vespertilio

19. *Vespertilio murinus* LINNAEUS, 1758; Data deficiency

B.3. Habitats and roost sites

Due to the lack of an official survey and monitoring program, only the last roosting site of *Rhinolophus ferrumequinum* (125 females) and *Myotis emarginatus* (580 females) in the southeast of Luxembourg has been surveyed regularly since 1982. The Ministry of Environment has started an initiative for protection of this vital colony.

Unfortunately there has been no monitoring of the success of previous bat protection programs (LIFE- program) in Luxembourg.

Nevertheless the "Administration des Eaux et Forêts" is trying to set up a monitoring program for bat species of appendix II of Habitat Directive (92/43/CEE). In 2005, all known colonies of *Myotis myotis* in Luxembourg were monitored. The "Station Biologique de l'Ouest" has begun a monitoring program of 17 roosting colonies in the Western part of Luxembourg since 2005. For the project opening lofts and attics of churches: "Action Combles & Clochers" carried out now on 65 churches, the presence and acceptance of the protection measures are controlled by plastic sheets on the floor ("zones témoins").

In May 2005, the "Administration des Eaux et Forêts" has started a three-year research project to assess information on the roosting sites of *Myotis bechsteinii* in representative Luxembourg forests. Twelve nursing colonies totaling 28-70 females could be found and over 37 roosting trees were marked to be protected from timber logging.

B.4. Threats

All threats to bat populations presented in the last report are still remaining.

Several important roosting sites of *Myotis myotis* and *Myotis emarginatus* have been or are being renovated within the next years. Due to efforts of the "Administration des Eaux et Forêts", most of the colonies could be conserved, but due to a missing professional 'fulltime' structure, the conservation of these colonies is not guaranteed in the long term.

B. 5. Data Collection

The data of a national bat survey project (e.g. monitoring, research projects, impact studies, ...) is collected by the Natural History Museum in the national database RECORDER 2000. All available bat data are published in the atlas of bats of Luxembourg (Harbusch et al. 2002).

C. Measures taken to implement article II of the Agreement

C. 6. Legal Measures taken

The Bat Agreement came into force at 5th August 1993. All bat species are protected by law in Luxembourg (Law of 19.04.2004). A five-year nature protection plan is in elaboration by the Ministry of Environment. The Mammal Group of the National Museum of Natural History proposed action plans for various endangered bat species (*Rhinolophus ferrumequinum*, *Myotis emarginatus* and *Myotis myotis*).

C.7. Sites identified and protected

Whereas the major roosting sites of house dwelling bats and most of the underground hibernating sites are well known, efforts have to be made to identify key sites for tree living bats (e.g. *Myotis bechsteinii*) in forests in Luxembourg (3-year program). Still new nursing colonies are detected by public awareness (ex. nursing colony 180 *M. myotis* in Clerveaux).

C. 9. Promotion Activities

A certain number of presentations and bat detector excursions have been organized during the last 3 years:

- ☛ In July 2004 the IXth European Bat Night was organized at the '*Eglise de Mersch*'.
- ☛ In July 2005 the Xth European Bat Night was organized at the '*Eglise de Fischbach*'.
- ☛ In July 2006 the XIth European Bat Night was organized at the '*Ecole de musique de Clervaux*'.

Interested persons watched live infrared camera transmission from a mixed nursing colony of *Myotis myotis*. A bat detector watch closed this successful organization. Over 600 persons (per year) have attended this happening in 2004 and 2005, and almost 280 persons in 2006, and have observed the *Myotis myotis* colony emerging from the roost situated in the church. Infrared video projection, workshops for children and a bat-walk gave the visitors an insight into the biology of bats.

Since the first organization of the event of the EBN, around 4.000-5.000 most young people have been informed on the aims of bat conservation.

In May 2005, the "Administration des Eaux et Forêts" has published a booklet about forest dwelling bats. The title of the publication (in German) is "*Fledermäuse in den Wäldern Luxemburgs*" shall inform foresters and private forest owners on the importance of conservation of bats in forest. This publication can also be downloaded directly as a PDF-file at :
http://www.environnement.public.lu/conserv_nature/publications/flederm_w_luxbg/Fledermaeuse_Luxemburg.pdf.

The "Administration des Eaux et Forêts" has also edited a bat-sticker for children. The name of the bat illustrated on the sticker "Flanti" has been chosen by children through a competition during the Bat-Night in Luxemburg in 2005.

The National Museum of Natural History reedited the LIFE-exhibition on bats species which informs about the general behavior and protection of bats.

C. 10. Responsible Bodies in Accordance with article III.5.

A responsible body in accordance on article III.5. of the Agreement is existing in Luxembourg in the name of the "Administration des Eaux et Forêts", which do, in collaboration with the National Museum of Natural History some advice to the public homing bats in their houses.

A bat line (bat@ef.etat.lu) has been active for a few months, allowing members of the public as well as communes and government departments to consult bat experts to indicate presence of bats in their buildings, to get advice of all kind, or to ask for help in the case of disturbance by bats. Assistance will be given by personnel of the Administration des Eaux et Forêts or of the National Museum of Natural History.

C. 11. Additional actions

Together with competent authorities and available volunteers, a decentralized network for bat work, under supervision of the "Administration des Eaux et Forêts", in collaboration with the National Museum of Natural History, is under construction and will be hopefully operational by the end of 2006 or 2007.

The following conservation projects have not been put in place specifically for bats, but most of them will benefit bats directly or indirectly. Most of them are located in areas of the Natura 2000 network.

Natural forest reserves (RFI)

Enneschte Boesch, Bertrange; *Beetebuerger Boesch*, Bettembourg; *Laangmuer (Grengevald)*, Luxembourg; *Pëttenboesch*, Mersch; *Grouf*, Schengen; *Haardt*, Dudelange;

Extensive grazing projects

Syre, Mensdorf; Alzette, Dumontshaff Schifflange; Vallée de l'Ernz Noire, Grundhof; Sûre, Pont Misère; Haardt, Dudelange; Belgrad, Frisange; Mamertal, Schoenfels; Eischtal, Reckange;

River restoration projects

Alzette, Schifflange; Alzette, Walferdange; Alzette, Hesperange; Syre, Mensdorf; Mamer, Mamer; Chiers, Pétange;

Urban conservation projects

Brill, Mamer

C. 12. Recent and ongoing protection programs (including research):

Protection:

Protection Program: „*Combles et Clochers*” (“attics and church-towers”) done by "*Stations Biologiques*", financed by and carried out under supervision of the "Administration des Eaux et Forêts", opening 65 churches for bats in the country. This program will hopefully be extended to all churches in Luxembourg (>380 churches).

The "Administration des Eaux et Forêts" is trying to establish a system of responsible persons (foresters) to survey and monitor all major nursing colonies of bats of appendix II of the Habitats Directive. For this purpose, specialized bat courses for ground personnel (foresters) have been held.

Research:

- A research program on *Myotis emarginatus*, focusing on roosting and habitat preferences, has been carried out from 2004 to 2006. The results of this research will be published soon.
- A three-year study on the occurrence of *Myotis bechsteinii* is carried out in representative forest ecosystems of Luxembourg. Two MSc theses on the autecology of this species were carried out in the forest "Friemholz" (Universities of Trier, Leipzig and Ulm). The results of these research projects will be available in 2007.
- A five-year monitoring program was launched by the National Museum of Natural History on the occurrence of bats in forests.
- In August 2005, the Administration des Eaux et Forêts and the National Museum of Natural History, together with a local conservation structure, distributed a small questionnaire to all members of the public of three villages (Pratz, Redange, Ospern), aiming at detecting bat colonies thus far unknown. This initiative notably yielded new colonies of *Myotis emarginatus*.

C. 13. Potential effects of pesticides

There has been until now no research on the effects of pesticides on bats in Luxembourg. A list of harmless

timber treatment products is available upon demand.

D. Functioning of the Agreement

D.14. Co-operation with other Range States

Transboundary co-operation with the bat-workers of France, Germany and Belgium is taking place regularly. A meeting has been held in Luxemburg with the AFSSA (Nancy, F) for collaboration to survey bat rabies. The voluntary contribution of Luxembourg made possible the representatives and bat specialists of countries in financial transition to attend several IWG's (Rabies, ...) and AC's.

D.15. Measures taken to implement the MOP-Resolutions

Resolution 2.1 - Consistent Monitoring Methodologies

Luxemburg contributed to the IWG by giving advice how to monitor two endangered bat species:

**Rhinolophus ferrumequinum*

**Myotis emarginatus*

The unique colony of *Rhinolophus ferrumequinum* has now been monitored for more than 20 years.

Resolution 2.4 Transboundary Program: Habitat Proposals

In order to prevent "bat-tourism" and for bat conservation reasons, these sites will not be published in this report, but will be available at the IWG for possible discussion.

Resolution 2.5 Geographical Scope of the Agreement

Resolutions 2.7 and 3.3 – Format of National Reports

The report has been prepared accordingly to the new formats.

Resolutions 2.8, 3.8 and 4.9 On the Implementation of the Conservation and Management Plan

An effort to implement the Article III of the Agreement has been taken, as presented in this Report. Bat workers were involved by setting-up a national protection plan for the species of *Rhinolophus ferrumequinum*.

Resolutions 3.7- Amendment of the Agreement

The following amendments of the Agreement were brought in national legislation:

- ☛ *Loi du 6 mai 2000 portant approbation des amendements à l'Accord relatif à la conservation des chauves-souris en Europe, adoptés à la première session de la quatrième réunion des Parties, qui s'est tenue à Bristol, du 18 au 20 juillet 1995.*

- ☛ *Loi du 13 août 2002 portant approbation de l'Amendement à l'Accord relatif à la conservation des chauves-souris en Europe du 4 décembre 1991, adopté à la troisième réunion des Parties à Bristol du 24 au 26 juillet 2000.*

Resolutions 4.3- Guidelines for the Protection and Management of Important Underground Habitats

One major hibernating site of Luxembourg has been included to the database of the IWG. A meeting was held with the competent authorities and ARCELOR to preserve some 150 old mining entrances for bats in the south-west of the country.

Resolution 4.4 – Bat-Conservation and Sustainable Forest Management

As a result of the *Myotis bechsteinii* study, management recommendations for sustainable forest management will be transmitted to the ground personnel (foresters). Public forests shall be managed under the criteria of the forest labels PEFC and FSC.

Resolution 4.5 – Guidelines for the Use of Remedial Timber Treatment

Remedial Timber Treatment is not carried out in Luxembourg.

Resolution 4.6- Guidelines for the Issue of Permits for the Capture and Study of Captured

Wild Bats

In Luxembourg, the issue of the permits for the capture and study of bats is regulated by law (law of the 19th January 2004, articles 20 and 33). Details of this law can be put at the IWG's disposal. This law can be downloaded directly as a PDF-file at <http://www.legilux.public.lu/leg/a/archives/2004/0102901/0102901.pdf#page=2>.

Resolution 4.7- Wind Turbines and Bat Populations

A meeting with the competent authority in the Ministry of Environment was held in order to identify guidelines and no-go-areas for future construction of wind turbines in Luxembourg. Bat-workers should be involved at an early stage in the decision process.