AGREEMENT ON THE CONSERVATION OF POPULATIONS OF EUROPEAN BATS (EUROBATS)

Report on implementation of the Agreement in the Czech Republic

General InformationGeneral information

- *Name of Party:* Czech Republic
- *Date of Report:* April 2009
- *Period covered:* 2007 – 2008
- *Competent Authority:* Ministry of Environment
- *Changes regarding:*
- *Competent Authority:* - - -
- *Appointed Member of the Advisory Committee:* Josef Chytil
- *Membership of other committees/working groups:* - - -

Status of Bats within the Territory of the PartyStatus of Bats within the Territory of the Party

1. Summary Details of Resident Species

So far, 26 bat species have been recorded in the Czech Republic. The new species reported since the last report is *Pipistrellus kuhlii* (Znojmo, S-Moravia, see Reiter t al. 2007). The occurrence of another three species is considered to be more or less accidental (*Rhinolophus ferrumequinum, Nyctalus lasiopterus, Hypsugo savii*). Two species (*Myotis blythii, Myotis dasycneme*) are found rarely but repeatedly in hibernacula and during autumn migrations; for the second one the numbers of records are increasing including confirmed reproduction in the country (*S Moravia*). Nineteen species are considered to be resident ones; they breed regularly in the country (including *Pipistrellus pygmaeus and P. nathusii*). The occurrence (the occurrence of pregnant females) of newly recognized species *M. alcathoe* was proved in more areas of the country.

2. Status and Trends

The table below shows current status and trends of all bat species recorded in the Czech Republic.

Note:

a) Population estimates are not available.
b) The official Red List of all vertebrate species of the Czech Republic including bats was published in 2003 (Plesník et al. 2003). The part devoted mammals was prepared by Anděra et Červený (see Literature sources at the last page). All the criteria are based on the 2003 IUCN criteria and the guidelines for application of IUCN criteria at regional levels. The table follows the new classification of bat species.

Species	Distribution	Status	Trends	Red List
Rhinolophus ferrumequinum	11 x recorded	very rare	?	CR
Rhinolophus hipposideros	restricted	relatively rare	+	EN
Myotis bechsteinii	restricted	rare	?	DD
Myotis oxygnathus	restricted	very rare	?	CR
Myotis brandtii	widespread	relatively common	?	
Myotis dasycneme	restricted	rare	+?	CR
Myotis alcathoe	restricted?	rare?	?	not evaluated
Myotis daubentonii	widespread	common	+	
Myotis emarginatus	restricted	rare	+ ?	VU
Myotis myotis	widespread	relatively common	+	VU
Myotis mystacinus	widespread	common	?	
Myotis nattereri	widespread	relatively common	?	
Nyctalus lasiopterus	3x recorded	very rare	-	
Nyctalus leisleri	restricted	rare	?	DD
Nyctalus noctula	widespread	common	?	
Eptesicus nilsonii	restricted	common	+	
Eptesicus serotinus	widespread	common	?	
Pipistrellus pipistrellus	restricted	common	?	
Pipistrellus pygmaeus	restricted	common	?	DD
Pipistrellus nathusii	restricted?	rare	?	DD
Pipistrellus kuhlii	1x recorded	very rare	-	
Hypsugo savii	4x recorded	very rare	-	DD
Plecotus auritus	widespread	common	?	
Plecotus austriacus	widespread	relatively common	?	
Vespertilio murinus	restricted	rare	?	DD
Barbastella barbastellus	restricted	relatively common	+	

3. Habitats and Roost Sites
No substantial changes.

4. Threats
Three important factors currently affecting bat roost sites in the country should be highlighted:

a) renovation, reconstruction or rearrangement of roofs and loft spaces in old buildings (churches, castles etc.) Due to economic development of the country, an increasing number of maternity roosts (especially those of Myotis myotis) are threatened by this factor. Although the species inhabiting this kind of shelters are provided with strict legislative protection, relevant nature conservation authorities are not always informed about the planned renovation.

b) unsuitable methods of safeguarding of abandoned mines which host winter roosts of bats. Important progress was achieved in the last triennium, and nowadays majority of these activities are realized after the consultation with nature conservation authorities.
c) padding a prefabricated house blocks to warming rearrangements. In the last two years, this activity occurred in a large scale, and the influence on several species (mainly *Nyctalus noctula, P. pipistrellus/P. pygmeus*; less *Vespertilio murinus* and *Eptesicus serotinus*) is critical. Those species used more and more different holes (between panels; above the windows; air-ducts) for both maternity colonies and wintering. The problem is closing of air-ducts and of all holes mentioned above. Sometimes, due to lack of information of firms, owners of blocks of flats etc., fatal accident occurred (case of 670 hibernating noctule bats, from them only 328 were rescued, in February 2009 in Dobrichovice). Fortunately, a common grant with Slovak Bat Trust and Koord. Fledermausschutz in Thuringen was agreed, and one fully-employed coordinator in the Czech Republic deals with problem, together with Czech Ornithological Society – BirdLife Czech Republic (the same problem with swift breeding).

5. Data collection, analysis, interpretation and dissemination

a) Monitoring of bat population in underground covers more than 700 sites, the method and timing (mid January -mid-February) follows the concept established and performed since 1969. The data are available from central database.
b) Monitoring of current satus of selected maternity roosts
c) Monitoring of maternity colonies of pSCI species, with special emphasis on monitoring of nursery colonies of *Rhinolophus hipposideros, Myotis myotis* and *Myotis emarginatus* (NATURA 2000 species). Recent census covers 120 localities.
d) Monitoring of bat population in feeding grounds with aid of bat-detectoring at regular transects in 10 localities of national parks and protected areas.
e) Bat population at swarming sites as recorded by mist-netting (actually undertaken at 9 localities at May, July and September term on each).
f) The monitoring scheme is coordinated by the Czech Bat Conservation Trust with particular effort by the first professional employer of this NGO, dr. Tomáš Bartonička. Both professional zoologists and volunteers are involved in the surveys. The bat monitoring programme presents one of the largest and most complex monitoring project in the country. The programme is partly financially supported by the Agency for Nature and Landscape Conservation.
g) The monitoring scheme for the underground hibernacula was succesfully implemented in Lebanon. The third year of the project was perfermed already by local colleagues and presented in the Ouat el Óuate Lebanese Review of Speleology.

An extensive scientific research concerning bats is traditionally performed in the professional institutions at Charles University Prague, Masaryk University Brno, South-Bohemian University in Ceske Budejovice as well as at the institutes of Academy of Science, and in National Museum Prague.
The projects covers (among other) e.g.

- systematics, biogeography and biology of bats in the Central Europe, Mediterranean and the Middle East
- fossil record of bats in these regions
- community structures and biology of bats in different forest types of the Czech Republic

- distribution of *Pipistrellus pipistrellus* and *Pipistrellus pygmaeus* in the Czech Republic, their habitat preferences, prey preference
- a complex study of a model population of *Pipistrellus nathusii* in Southern Bohemia
- ecology and behaviour of *Myotis alcathoe*
- flight activity and habitat use in *Nyctalus noctula*
- flight activity of bats out of the vegetation period
- thermal biology of breeding colonies of *Myotis myotis* in changes in pre-hibernation period
- parasitation of *Myotis daubentonii* by *Spinturnix andegavinus* (Acarina, Mesostigmata)
- host-parasite interactions of different bat species and *Cimicidae*

In addition to professional publication output in scientific journals, results of these research projects are presented at national zoological conferences held annually in Brno and at annual meetings of the Czech Bat Conservation Trust (traditionally in April in Prague).

- Bat banding

Bat banding is actually restricted to few special projects. The database of all former records (about 100,000 items) is currently available on-line to members of CESON.

Measures Taken to Implement Article III of the Agreement

6. Legal measures taken to protect bats, including enforcement action

The legislative protection of all bat species of bats in the Czech Republic is ensured by up-dating of the Act No. 114/1992 on nature conservation and landscape protection from 2004. This up-dating included mainly all principles of Birds and Habitats Directives of EU into our legislation. Moreover, there are several species particularly protected through the Regulation No. 395/1992 (see the last national report). Exceptions (permits) to the Act are granted by competent authorities (Ministry of Environment and regional authorities). Offence against the law is penalized by the Czech Environmental Inspection.

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

Current protection of bat sites in the Czech Republic is relatively good, many important hibernacula are designated as or included in Particularly Protected Areas (under the Act No. 114/1992 on nature conservation and landscape protection).

More extensive and more efficient protection of bat sites is provided within the NATURA 2000 network. There are 153 SCIs established only and/or partly (together with other species) for bats. Those SCIs include both important wintering sites and maternity colonies of bats´ species included in Habitats Directive.

In total, eight bat species listed in Annex II of the Habitats Directive occur in the Czech Republic. However, no sites are proposed for *Rhinolophus ferrumequinum* and *Myotis blythii* whose occurrence in the country is very rare, rather of accidental character. The most important hibernation sites have been identified for *Rhinolophus hipposideros, Myotis myotis, M. emarginatus, M. dasycneme* and *Barbastella barbastellus.* Similarly, the most numerous nursery colonies have been listed in *R. hipposideros, Myotis myotis* and *M. emarginatus.* Therefore, most pSCIs are shelters (winter or summer roosting sites). Due to the lack of data on maternity roosts of *Barbastella barbastellus* and on roosts of *Myotis bechsteinii,* several larger areas of well-preserved woodland, known to host these species (based on netting results), have been selected as pSCIs.

8. Consideration given to habitats which are important to bats
See above.

9. Activities to promote the awareness of the importance of the conservation of bats
Within the last years, the European Bat Night has become an important public awareness event in the country. While it was held at four sites only in 1999 and 2000, the number of events increased to 26 in 2008. The total number of participants reached more than 2,600 (40 % are children). The events are organized by the Czech Bat Conservation Trust in co-operation with other NGOs (Czech Union of Nature Conservationists), staff of show caves, administrations of Protected Landscape Areas etc. For details, see reports on the European Bat Night in the Czech Republic.

Several series of postcards, folding picture-books and a hide-game with bat photos were published by an active bat group (members of the Czech Bat Conservation Trust) in Liberec. These materials are used during European Bat Nights and other events and have met with much success.

10. Responsible bodies, in accordance with Article III.5 of the Agreement, nominated for the provision of advice on bat conservation and management
No changes.

11. Additional action undertaken to safeguard populations of bats
See mainly B 4a,b,c. The station for handicapped bats 'Nyctalus' enlarged it's activities for the whole Central Bohemia.

12. Recent and ongoing programmes (including research and policy initiatives) relating to the conservation and management of bats. In the case of research, summaries of completed projects should be provided, giving references where possible and acknowledging the sources of funding.

a) the database of ringed bats was finished, up-dated and presented in a on-line form at the web page of CESON
b) the web pages of CESON (www.ceson.org) were up-dated, including the help-line with padding house warming and handicapped bats
c) new brochure deals with recommendation on reducing conflicts between bats and wind farms was published
d) new brochure about protection of bats and swifts in blocks of flats was published
e) finalization of manual of care and treatment of accepted, handicapped and injured bats together with cooperation of vets
f) finalization of a book "Bat Research and Bat Protection in the Czech Republic"; it will be available at EUROBATS meeting in Prague in 2010.
g) finalization of a film "The Bat Is Behind Door"; it will be available at EUROBATS meeting in Prague in 2010.
h) 14 members of CESON took part at 11th European Symposium on bats in Cluj, Romania, in August 2008, with 18 presentations.

13. Consideration being given to the potential effects of pesticides on bats and their food sources, and efforts to replace timber treatment chemicals which are highly toxic to bats
No changes concerning the existing legislation (see the national report submitted in 2003). When permits (exceptions to the Act No. 114/1992 on nature conservation and landscape protection, see point 6) are granted by the Ministry of Environment for renovation of roofs and loft spaces in buildings inhabited by *Rhinolophus hipposideros* and *Myotis myotis* nursery colonies, they

include prohibition of the use of timber treatment chemicals which are toxic to bats (these chemicals are listed in the permit).

Functioning of the Agreement

14. Cooperation with other Range States

The Vespertilio, an international journal of chiropterology, is published yearly by the Czech Bat Conservation Trust (CESON) and the Slovak Group for Bat Protection (SON) opened to international public.

There is a good tradition of cooperation between the Czech Republic and Slovakia in research projects (hibernacula counts etc.).

Common grant with Slovak Bat Trust and Koord. Fledermausschutz in Thuringen was signed, to solve the problems with padding a block of flats warm (and at the same time heavily affect the populations of mainly *N. noctula* and *Pipistrellus* sp. – see also B 4c.

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

Resolution 3.5 (International Year of the Bat) – see point 9 of this report.
Resolution 3.7 (Amendment of the Agreement) – The Amendment was accepted by the Government in December 2001.
Resolution 3.8 (Implementation of the Conservation and Management Plan)

ad 1: Legal Requirements

All bat species occurring in the Czech Republic are nowadays protected because of transposition of the Habitats Directive into national legislation. See also point 6 of this report.

ad 2: Population Survey and Monitoring

Of the species listed in the Action Plan, seven occur in the Czech Republic. While *Rhinolophus hipposideros* and *Myotis myotis* are monitored carefully in the country (regular hibernacula counts which follow a standard methodology, but also counts at maternity roosts are carried out, see point 5 of this report), monitoring of the other species (*Myotis blythii, M. bechsteinii, Eptesicus serotinus, E. nilssonii, Nyctalus noctula*) is difficult because of their ecology and for logistic reasons (lack of resources). *E. nilssonii* is well monitored during winter counts; *N. noctula* will be newly widely monitored through programme of bats´ monitoring project at blocks of flats areas.

ad 3: Roosts

Nationally agreed guidelines for the conservation of roost sites meriting protection have not been established yet. However, the first step towards this is the manual for regional authorities, mentioned under point 9 of this report.

The important underground roost sites for bats in the Czech Republic have been identified and the data are available to nature conservation authorities.

ad 4: Foraging Habitats

Surveys to identify critical feeding areas close to maternity colonies of national or international importance were started e.g. for *M.barndti, M.mystacinus, M.alcathoe* and *M. emarginatus*.

Survey of influence of fragmentation of woodlands to bat community was underatken during

2007-2008..

National guidelines for conservation of bat habitats have not been drafted yet.

ad 5: Promoting Public and Professional Awareness of Bats and their Conservation and Providing Advice

There is a continuing effort at public awareness in the country (see point 9 of this report). The negotiations concerning NATURA 2000 sites were used also for the increase of public awareness of bats.

ad 6: Pesticides

See point 13 of this report

ad 7: International Co-operation

See point 14 of this report. No measures to implement the species action plans for *Rhinolophus ferrumequinum* and *Myotis dasycneme* have been adopted in the country, since these two species occur only rarely there.

Important literature sources:

Anděra M., Červený J. 2003: Červený seznam savců České republiky /Red List of Mammals of the Czech Republic/. Příroda, Praha, 22: 121-129.

Anděra M., Hanák V. 2007: Atlas of the mammals of the Czech Republic. A Provisional version. V. Bats (*Chiroptera*) – Part 3. Vespertilionid bats (*Vestertilionidae – Vespertilio, Eptesicus, Nyctalus, Pipistrellus, Hypsugo*). Národní muzeum,, Praha. 172 pp.

Hanák V., Anděra M. 2005: Atlas of the mammals of the Czech Republic. A Provisional version. V. Bats (*Chiroptera*) – Part 1. Horseshoe bats (*Rhinolophidae*), vespertilionid bats (*Vestertilionidae – Barbastella barbastellus, Plecotus auritus, Plecotus austriacus*). Národní muzeum,, Praha. 120 pp.

Hanák V., Anděra M. 2006: Atlas of the mammals of the Czech Republic. A Provisional version. V. Bats (*Chiroptera*) – Part 2. Vespertilionid bats (*Vestertilionidae – genus Myotis*). Národní muzeum,, Praha. 185 pp.

Reiter A., Benda P., Hotový J. 2007: First record of the Kuhl´s Pipistrelle, *Pipistrellus kuhlii* (Kuhl, 1817), in the Czech Republic. Lynx (Praha), n.s., 38: 47-54.

+ two new issues of *Vespertilio* journal: No. 11 (2007) and 12 (2008). The contents see: http://www.ceson.org/publikace.php