National report of the Kingdom of the Netherlands on the implementation of the Agreement on the Conservation of Population of European Bats: 2006-2009

A General Information

Name of Party	Kingdom of the Netherlands
Date of Report	1-7-2010
Period covered	2006-2009
Competent Authority	Ministry of Agriculture, Nature and Food Quality (ANF) Directorate for Nature, Landscape and Rural Affairs Dr. Folchert van Dijken P.O. 20401 2500 EK The Hague the Netherlands tel.: +31 70 3785509 fax: +31 70 3786146 e-mail: f.van.dijken@minlnv.nl
Appointed Member of the Advisory Committee	Peter H.C. Lina Netherlands Centre for Biodiversity 'Naturalis" c/o P.O. Box 835 2300 AV Leiden the Netherlands tel.: +31 71 5314979 fax: +31 71 5766268 e-mail: peter.lina@ncbnaturalis.nl phclina@telfort.nl

B Status of Bats within the Territory of the Party

1. Summary Details of Resident Species

Thus far 22 bat species have been recorded in the Netherlands. Of these, 20 are recognised as native, but 3 of these are now considered regionally extinct. The other two species are vagrants: *Nyctalus lasiopterus* (one record, possibly a case of passive transport) and *Eptesicus nilssonii*. Two *Eptesicus nilssonii* were found on oil rigs in the Dutch EEZ in the North Sea (Boshamer & Bekker, 2008) and one *Eptesicus nilssonii* was found in the central part of the country in 2003.

Rhinolophus ferrumequinum, *Rhinolophus hipposideros* and *Barbastella barbastellus* are regarded as being extinct. Maternity colonies have never been recorded for *Rhinolophus ferrumequinum* and *Barbastella barbastellus*. All maternity colonies of *Myotis myotis* and *Rhinolophus hipposidero*s known from earlier times have disappeared.

Despite considerable efforts in previous years, *Pipistrellus pygmaeus* was only recently discovered in two localities (Cornelis, 2009). Their roosts are unknown.

Of *Vespertilio murinus*, *Myotis brandtii* and *Myotis bechsteinii*, only one confirmed maternity colony is known.

Myotis emarginatus has one small and two large maternity colonies in the province of Limburg (Vergoossen *et al.*, 2009). The small maternity colony may be a satellite colony from a larger colony in Belgium. The two larger colonies together seem to be a separate summer population, isolated from the ones in neighbouring parts of Germany and Belgium, although bats from the colonies share hibernacula in the south of the Netherlands.

Myotis dasycneme is widely spread in the west and north of the Netherlands. The majority of its Dutch population consists of females.

Eptesicus serotinus and *Nyctalus noctula* are both numerous and widespread, but there are strong indications that their populations are declining. For this reason, they were placed on the national Red List of Threatened Mammals.

Pipistrellus nathusii is a common species but in the period 2006-2009 no maternity colony was recorded. From the second half of May to the first half of August, the majority of its population consists of males; in contrast with autumn, winter and spring, when they are joined by migrating females.

Presence of *Plecotus austriacus* is limited to the south of the Netherlands.

Myotis mystacinus, Myotis nattereri, Plecotus auritus, Myotis daubentonii and Pipistrellus pipistrellus are widely spread species.

2. Status and Trends

In 2006, the Ministry of Agriculture, Nature and Food Quality (ANF) commissioned the Dutch Mammal Society to draft the second Red list of mammals. The assessment was done according to national criteria and according to the IUCN criteria with application of the regional guidelines. The proposed Red List (Zoogdiervereniging VZZ, 2007) was formalised by the Dutch government on 4th September 2009 by publication on the *Staatscourant* (Government Gazette) website with number 2009-13201. So from 2009 it has replaced the old Red List of mammals of 1994.

Red list status and population estimates of all bat species of the Netherlands.

Species	**Population estimates**	**IUCN Red List category**
Rhinolophus ferrumequinum	-	regionally extinct
Rhinolophus hipposideros	-	regionally extinct
Myotis mystacinus	2,500-4,000[1]	least concern
Myotis brandtii	<125	endangered
Myotis nattereri	1,500-3,000[1]	least concern
Myotis emarginatus	1,200-1,600	near threatened
Myotis daubentonii	15,000 - 30,000 [1]	least concern
Myotis dasycneme	12,000 - 16,000	least concern
Myotis myotis	40-50[2]	critically endangered
Myotis bechsteinii	<75[3]	critically endangered
Pipistrellus pipistrellus	300,000 - 600,000	least concern
Pipistrellus nathusii	50,000 - 100,000	least concern
Pipistrellus pygmaeus[4]	unknown	not yet assessed
Eptesicus serotinus	25,000 - 40,000	least concern
Nyctalus noctula	4,000 – 6,000	vulnerable
Nyctalus leisleri	<100	critically endangered
Nyctalus lasiopterus	-	not assessed
Eptesicus nilssonii	-	not assessed
Vespertilio murinus	100 - 250	vulnerable
Barbastella barbastellus	-	regionally extinct
Plecotus auritus	5,000 - 9,000	least concern
Plecotus austriacus	100 - 250	endangered

[1] Estimates for the 1990s. (Limpens *et al.*, 1997).
[2] Hibernating animals only.
[3] About five animals are counted in the hibernacula yearly. At swarming sites, 58 animals were caught in 2008 (Janssen *et al.*, 2008).
[4] As this species was discovered in summer 2008 only, no population estimates were done yet. It is expected that the population is very small.

Trends in species with a current status of extinct, rare, or endangered

The former distribution of both *Rhinolophus* species was restricted to Southern Limburg. Of *Rhinolophus ferrumequinum* there are no records in its historical range since 1986 and for *Rhinolophus hipposideros* there are no records since 1983. *Barbastella barbastellus* has not been recorded since 1994.

The current winter population of *Myotis myotis* is small but increasing. Maternity colonies are no longer known since the 1960s, but a small colony was discovered in Belgium, close to the Dutch border, in 2009, when a lactating female was radiotracked from the Netherlands. See for trends Section 5 of this report.

Myotis bechsteinii is a rare species but females with signs of reproduction have been caught at autumn swarming sites near Dutch hibernacula in 2006, 2007 and 2008. In 2009, a maternity colony was found in a wood (Savelsbos) near Maastricht. It might be more common than the records indicate (Janssen *et al.*, in prep).

Myotis brandtii and *Nyctalus leisleri* are rare species of the east of the Netherlands. Due to more survey activities the number of records of both species is increasing, but the trend is unknown.

Plecotus austriacus is a rare species of the south of the Netherlands. It looks as if the population is increasing (Buys *et al.*, 2009).

3. Habitats and Roost Sites

Hollow trees are the only available natural roosts for bats in the Netherlands. Apart from these roosts, there are many types of man-made constructions available that can also be used by bats either in summer or winter, e.g. subterranean limestone quarries, old fortresses, ice-houses, bunkers, cellars, spaces under roofs, and cavity walls of buildings. Bat boxes are being applied in several localities.

In the Netherlands wetlands are key feeding habitats for bats, especially for *Myotis dasycneme*, *Myotis daubentonii* and *Nyctalus noctula*. Recently 22 wetlands have been protected as Natura 2000 site, because of their importance for *Myotis dasycneme*.

4. Threats

The threats to bat populations in the Netherlands are:

- loss of suitable living spaces due to a) the reconstruction of roof cavities;
  b) insulation of cavity walls of buildings,
  c) the felling of hollow trees;
- the loss of suitable habitat due to a) the deterioration and fragmentation of the landscape,
  b) intensification of management in agriculture and forestry,
  c) inappropriate timing of habitat management,
  d) the loss of linear landscape elements,
  e) the use of pesticides, and pollution.
- Lack of knowledge on successful mitigation approaches;
- Impact of wind farms.

5. Data Collection, analysis, interpretation and dissemination

Data on the distribution of bats are collected by national and regional natural history organisations, the Dutch Mammal Society and by nature site management organisations (*Natuurmonumenten*, State Forestry Service) and are inserted into compatible databases. There are two internet portals for the entry of wildlife records: www.telmee.nl and www.waarneming.nl. Data are now gathered and managed by the Nature Data Authority into the National Database Flora and Fauna. These data are available for impact assessments.

A mammal atlas project has started in 2008 by the Dutch Mammal Society.

Counts of hibernacula are a major source of data. The monitoring of hibernating bats in these roosts is done in the framework of the national nature monitoring programme, the Network Ecological Monitoring (NEM), financed by the Ministry of ANF. The counts are done by volunteers. The scheme is co-ordinated

by the Dutch Mammal Society. Statistics the Netherlands calculates trends and indexes and oversees quality of the data.

Every winter period, the number of bats is monitored in 800 – 900 hibernacula across the country. The main hibernacula are subterranean lime stone quarries, 19th century fortresses, World War II bunkers, and ice houses. Data gathering of hibernacula was standardised in 1986. The scheme generates reliable trend data for *M. mystacinus/brandtii*, *M. nattereri*, *M. emarginatus*, *M. myotis*, *M. daubentonii*, *M. dasycneme*, and *Plecotus auritus/austriacus*.

In 2007, a second NEM monitoring scheme using counts of summer roosts on attics was started. This scheme has *Plecotus austriacus* and *Myotis emarginatus* as target species.

The trend and indexes are shown in table 2.

A third monitoring scheme, consisting of transects driven with cars and bat detectors, was abandoned after a pilot.

Index and trends of bat species in the Netherlands 2006-2009. Source: Network Ecological Monitoring.

Species	**Source**	**Start (100)**	**Index 2006**	**Index 2007**	**Index 2008**	**Index 2009**	**Longterm trend**
Myotis mystacinus	hibernacula	1986	296	295	333	347	Increasing
Myotis nattereri	hibernacula	1986	1203	1127	1501	1556	Strongly increasing
Myotis emarginatus	hibernacula	1986	1433	1460	2182	2077	Strongly increasing
Myotis emarginatus	roosts	1984	1417	1423	1429	1438	Strongly increasing
Myotis myotis	hibernacula	1986	197	171	300	????	Increasing
Myotis daubentonii	hibernacula	1986	253	222	214	212	Increasing
Myotis dasycneme	hibernacula	1986	283	288	324	276	Increasing
Plecotus auritus	hibernacula	1986	210	157	216	214	Increasing
Plecotus austriacus	roosts	1996	192	95	167	171	Increasing

C <u>Measures Taken to Implement Article III of the Agreement</u>

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

All bat species are strictly protected under the Flora and Fauna Act, which implements article 12 (species protection) of the Habitats Directive.

The Netherlands is also a Party to the Convention on the Conservation of European Wildlife and Natural Habitats (Council of Europe, Bern Convention). All bat species, apart from *Pipistrellus pipistrellus*, are listed in Appendix II to this Convention. *Pipistrellus pipistrellus* is listed in Appendix III to the Convention. However, in the Netherlands, *Pipistrellus pipistrellus* has the same conservation status as the Appendix II species.

The new Nature Conservation Act, which implements article 6 (site protection) of the Habitats Directive, has entered into force on 1 October 2005. Seven native bat species, (*Rhinolophus ferrumequinum*, *Rhinolophus hipposideros*, *Barbastella barbastellus*, *Myotis bechsteinii*, *Myotis dasycneme*, *Myotis emarginatus* and *Myotis myotis)*, are listed on Annex II to this Directive, and their conservation requires the designation of Special Areas of Conservation (SACs). A number of such areas has been selected for some of these species (see Section 7 of this report). However, due to a lack of data on the occurrence and distribution, no SACs have been selected for *Myotis bechsteinii*. No SACs were selected for both *Rhinolophus* species and for *Barbastella barbastellus* as they are extinct in the Netherlands.

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

As mentioned in Section 6, a number of Special Areas of Conservation (SACs) has been selected for some species listed on Annex II of the Habitats Directive. Designation decrees, including conservation objectives, have been formulated: 20 foraging areas of *Myotis dasycneme*, 6 areas with hibernacula of *Myotis myotis*, *Myotis emarginatus* or *Myotis dasycneme*, and one area with two maternity roosts of *Myotis emarginatus*. Although for the latter feeding areas and flight routes were not included in the SACs, these fall under the external influence of the SAC.

Additionally for two Bird Directive sites (SPAs) conservation objectives for *Myotis dasycneme* have been included in the designation decrees.
Currently, management plans for these SAC and SPAs are being formulated.

27 sites designated under Habitat Directive for bat species

Site Nr.	***Natura 2000 site***	***Species***	***Function***
9	*Groote Wielen*	*Myotis dasycneme*	Feeding area
10	*Oudegaasterbrekken , Fluessen en omgeving*	*Myotis dasycneme*	Feeding area
13	*Alde Feanen*	*Myotis dasycneme*	Feeding area
18	*Rottige Meenthe & Brandermeer*	*Myotis dasycneme*	Feeding area
34	*Weerribben*	*Myotis dasycneme*	Feeding area
35	*Wieden*	*Myotis dasycneme*	Feeding area
39	*Vecht en Beneden-Reggegebied*	*Myotis dasycneme*	Feeding area
57	*Veluwe*	*Myotis dasycneme*	Hibernacula
67	*Gelderse Poort*	*Myotis dasycneme*	Feeding area
72	*IJsselmeer*	*Myotis dasycneme*	Feeding area
73	*Markermeer & IJmeer*	*Myotis dasycneme*	Feeding area
74	*Zwarte Meer*	*Myotis dasycneme*	Feeding area
76	*Veluwerandmeren*	*Myotis dasycneme*	Feeding area
83	*Botshol*	*Myotis dasycneme*	Feeding area
90	*Wormer- en Jisperveld & Kalverpolder*	*Myotis dasycneme*	Feeding area
91	*Polder Westzaan*	*Myotis dasycneme*	Feeding area
92	*Ilperveld, Varkensland, Oostzanerveld & Twiske*	*Myotis dasycneme*	Feeding area
94	*Naardermeer*	*Myotis dasycneme*	Feeding area
95	*Oostelijke Vechtplassen*	*Myotis dasycneme*	Feeding area
97	*Meijendel & Berkheide*	*Myotis dasycneme*	Hibernacula
103	*Nieuwkoopse Plassen & De Haeck*	*Myotis dasycneme*	Feeding area
112	*Biesbosch*	*Myotis dasycneme*	Feeding area
151	*Abdij Lilbosch en voormalig klooster Mariahoop*	*Myotis emarginatus*	Maternity colonies
156	*Bemelerberg & Schiepersberg*	*Myotis dasycneme* *Myotis emarginatus* *Myotis myotis*	Hibernacula Hibernacula Hibernacula
157	*Geuldal*	*Myotis dasycneme* *Myotis emarginatus* *Myotis myotis*	Hibernacula Hibernacula Hibernacula
159	*Sint Pietersberg & Jekerdal*	*Myotis dasycneme* *Myotis emarginatus* *Myotis myotis*	Hibernacula Hibernacula Hibernacula
160	*Savelsbos*	*Myotis dasycneme* *Myotis emarginatus* *Myotis myotis*	Hibernacula Hibernacula Hibernacula

2 sites designated under Birds Directive with special attention for bat species

Sites Nr.	**Natura 2000 site**	**Species**	**Function**
12	Sneekermeergebied	*Myotis dasycneme*	Feeding area
93	Polder Zeevang	*Myotis dasycneme*	Feeding area

8. Consideration given to habitats which are important to bats

As reported previously, the Dutch government adopted the Nature Policy Document in June 1990. It was updated in 2000 in the document "Nature for people, people for nature", which is available on the website of the Ministry of ANF. The main objective of the Dutch nature policy is to make an essential contribution to a livable and sustainable society through the conservation, restoration, development and sustainable use of nature and landscape. This main objective should be read in an international context.
Since 1990, many projects and actions have been implemented. The construction of a National Ecological Network (NEN) has also begun. The NEN is a coherent network of areas, forming a sustainable basis for the ecosystems and species considered to be important in the (inter)national context. The network consists of core areas, nature development areas and ecological corridors. The sustainable development is supported by a buffer policy aimed at removing or minimising negative external influences on the core areas. Conservation measures for bat species will be taken partly in the form of habitat conservation, particularly through the creation of the NEN.

In September 2007 the Ministry of ANF published a document in English about a new approach of species protection, the so-called habitat-based approach. The new approach focuses on groups of protected species in their habitat rather than on individual species, as was the practice. The single species policy did not always prove effective. The new habitat-based approach is about a protection regime that benefits a range of species. It is targeted at habitats supporting a number of threatened species which makes it much more effective. The new approach aims to protect some 400 endangered plant and animal species, including four bat species, but by protecting habitats rather than single species, many more, less endangered species are likely to benefit as well. For some species however, specific measures will always remain necessary.

Partly financed by a budget of the Ministry of ANF for habitat-based approach the city of Utrecht has commissioned the Dutch Mammal Society to create a website on bats in towns www.vleermuizenindestad.nl .

9. Activities to promote the awareness of the importance of the conservation of bats

In 2006 the Landscape Management Foundation in the province of Gelderland has trained volunteers to act as *pro deo* consultants for problems with bat colonies in houses and other buildings, and to deal with injured bats and potential rabies-infected bats. In 2008 the Dutch Mammal Society has started to do the same in the province of Noord-Brabant.

The Landscape Management Foundation of the province of Limburg is co-ordinating a similar network of volunteers and civil servants of municipalities.

The activities are financed by the provinces, but these activities are shifting to the municipalities.

In 2006-2009, the National Pest Control Reference Centre has given several three day bat conservation and management trainings for pest control officers, land managers, nature conservationists and others who can meet problems with bats in buildings or are involved in the management of other types of bat dwellings. This training programme is a contribution to the implementation of the provisions of article III, paragraph 5, of the Bats Agreement.

In 2006-2009 the Dutch Mammal Society organised several seminars for authorities and consultants, to improve and involve bat conservation in site management and physical planning. Since 2008, the competent authority for compensation and mitigation permits is involved in the seminars.

The EUROBATS publications nos. 1 (EUROBATS celebrates its 15th anniversary, 1991-2006), 2 (Protecting and managing underground sites for bats) and 3 (Guidelines for consideration of bats in wind farm projects) have been sent to all registered Dutch bat workers.

In 2006 the Dutch Mammal Society issued a brochure on the protection of *Myotis dasycneme* (Haarsma, 2006).

The European Bat Night was organised by the Netherlands Bat Group in 2006, 2007, 2008 and 2009 with good result.

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

The responsible body in accordance with article III.5 of the Agreement has not yet been established. For the time being, advice on bat conservation and management was provided by individual bat experts on request. An expert working group on bat conservation and management will be established in 2010.

11. Additional action undertaken to safeguard populations of bats

The ministry of ANF, consultancies and the Dutch Mammal Society formulated a guideline on Impact Assessments. These guidelines give the minimal survey effort required.

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

Studies for Natura 2000

In the period 2006-2007, intensive studies to identify swarming sites in the Netherlands were undertaken by the Dutch Mammal Society, funded by the national government (Ministry of ANF) and the province of Limburg. In the period 2006-2007, a survey for *Myotis emarginatus* was undertaken by the Dutch Mammal Society, funded by the Ministry of ANF and the province of Limburg (Dekker & Limpens, 2007). In 2008 the province of Limburg funded again a study of the Dutch Mammal Society and NJN, a Natural History Youth Organisation, on swarming study at limestone quarries: 6 quarries were studied from July to to mid October. A total of 1,434 individuals was caught, of 13 species (of which a few very rare ones). Different species showed different peaks. During the season, composition converged to composition in winter (Janssen *et al.,* 2008). The results of this study and the survey for *Myotis emarginatus* are implemented in Natura 2000 management plans.

Zoonoses

The National Institute for Public Health and the Environment, the Central Veterinary Institute of the Wageningen University Research and the Netherlands Centre for Biodiversity 'Naturalis' have a programme on zoonoses, i.a. by bats. The long running passive surveillance of lEuropean Bat Lyssavirus (EBLV), started in 1986, was continued in the years 2006-2009 (Van der Poel *et al.,* 2005; Takumi *et al.,* 2009).Active surveillance on EBLV has started in 2006. A project on monitoring of coronavirusses in bats was started in 2006 (Reusken *et al.,* 2010). In 2007 and 2008 the Laboratory of Food Microbiology of the Wageningen University Research carried out a study on the occurrence of *Salmonella* and *Campylobacter* in bats.

The previously reported long-term study on the ecology of *Pipistrellus nathusii* in the Netherlands and its seasonal migration between the Netherlands and Central and Eastern European countries was continued.

Several studies on *Myotis dasycneme* were carried out. By the end of 2005 the Ministry of ANF financed a monitoring study for this bat, which will be carried out through to 2010. In 2006 the province of Friesland and the Prince Bernhard Fund for Culture financed a study on the occurrence of the pond bat in this province (Schut *et al.,* 2009). In 2008, a survey took place on the distribution of the pond bat in the province of Gelderland, funded by the provincial authorities. Ms Anne Jifke Haarsma is writing a thesis on the ecology of *Myotis dasycneme* in the Netherlands.

In December 2006 the province of Noord-Brabant published an action plan for bats (Twisk & Limpens, 2006). This programme is still running. One of the projects was a survey of bats in attics of churches in 2008.

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.

As reported previously, the supply and use of remedial timber treatment chemicals is regulated by the Board for the Authorisation of Pesticides. The registration process includes an assessment of ecotoxicity to animals, plants and parts of plants whose preservation is desired, or to soil, water or air although bats are not specifically included in such an assessment. The instructions for the use of remedial timber treatment products do not refer to possible hazard to bats. Neither are recommendations given to the industry to minimise any hazard to bats as a result of remedial timber treatment. Approved chemicals are synthetic pyretroids, boron compounds, propiconazole, azaconazole, and alkyldimethyl-benzyl-ammoniumchloride. The use of several harmful chemicals, including pentachlorphenol, has been prohibited for timber treatment. However a study in the province of Noord-Brabant has demonstrated that

pentachlorphenol, applied to timber long ago, is still killing bats, especially young (Korsten & van den Brink, 2009).

D Functioning of the Agreement

14. Cooperation with other Range States.

In 2008, the international project of Romania, Bulgaria and the Netherlands was finalised, producing two guidelines on Bats and impact assessment Guidelines. The Bulgarian guideline was written by Dr. Boyan Petrov, the Romanian one by Csaba Jere, Abigel Szodoray-Paradi, and Fargas Szodoray-Paradi. The work was done by the Bulgarian National Museum of Natural History, the Romanian Bat Association, the national governments of the involved countries and the Dutch Mammal Society.

By the end of 2008, a new BBI MATRA project on Bats and impact assessment Guidelines was started in cooperation with Serbia. Several bat workers from the Netherlands attended the XIth European Bat Research Symposium, held in Cluj (Romania) in 2008.

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

Resolution 2.2, Consistent Monitoring Methodologies

Bat species hibernating in underground habitats are monitored since a long time and include *Myotis myotis* and *Myotis bechsteinii*.

A scheme on the monitoring of bats in roosts in attics has started.

Resolution 2.4, Transboundary Programme: Habitat proposals

The Netherlands has no natural underground habitats for bats but has numerous artificial ones like subterraneous limestone quarries, (semi-) subterraneous bunkers, fortresses, ice houses, cellars etc. which are serving as underground habitats for bats, mainly being winter roosts. Records of bats in all known underground habitats are available in a central database.

Resolution 2.5, Geographical Scope of the Agreement

A long-term study on the ecology and seasonal migration of *Pipistrellus nathusii* is carried out.

Resolutions 2.7 and 3.3, Format of National Report

This report has been prepared in accordance to the adopted format

Resolutions 2.8 and 3.8, On the implementation of the conservation and management plan

Efforts to implement the provisions of article III of the Agreement are presented in this report.

Resolution 3.7, Amendment to the Agreement.

Accepted on 18 December 2003 by Declaration of the Minister of Foreign Affairs.

Resolution 4.3, Guidelines for the Protection and Management of Important Underground Habitats for Bats.

The identification of the important underground habitats, as required in Resolution 2.4, is currently being carried out by Ministry of ANF and the Dutch Mammal Society, and will be submitted by the former to the EUROBATS Secretariat in autumn 2010.

All underground habitats are protected by the provisions of the Flora and Fauna Act and are, where appropriate, physically protected against unauthorised entry. Key (artificial) underground hibernacula have received the Natura 2000 status.

In 2006 the Landscape Management Foundation in the province of Limburg published an action plan on underground hibernacula (Verboom, 2006).

Resolution 4.4, Bat Conservation and Sustainable Forest Management.

The types of forests and land management as causing problems for bats in forests have not yet been identified. There are not yet incentive schemes in use to provide resources for bat conservation measures in forests. Measures are not fully yet taken to identify the management and enhancement of key elements and key areas for bats in forests.

A code of conduct for logging was agreed, and is actively promoted by the State Forestry Service and the Ministry of ANF, to save hollow trees as much as possible and to identify prior to the logging of trees if they are roosts of tree dwelling bats.

Resolution 4.5, Guidelines for the Use of Remedial Timber Treatment.

Not yet implemented. See also Section 13 of this Report.

Resolution 4.6, Guidelines for the Issue of Permits for the Capture and Study of Captured Wild Bats. and Resolution 5.5: Amendment to Resolution 4.6: Guidelines for the Issue of Permits for the Capture and Study of Captured Wild Bats

The Guidelines were translated into the Dutch language, but are not yet implemented. The Ministry of ANF does not yet impose these guidelines, when issuing permits to capture bats for study purposes.

A number of active members of the Dutch Mammal Society formulated Guidelines for capturing and handling bats and developed a related course on methodology in theory and practice. These guidelines are voluntary, and not yet adopted by the government. Researchers and members of the society who want to make use of the catch and handle permit of the society are required to work according to the guidelines and must hand in a project plan.

Resolution 4.7, Wind Turbines and bat Populations and Resolution 5.6: Wind Turbines and Bat Populations: guidelines for the planning process and impact assessments

Investigations and research on the impact of wind turbines on bats are planned. Two desk studies on the issue in general, and on impact assessments and bats, have been commissioned by the Dutch national government. However, virtually no field work is being done on this subject so far. Unfortunately the effects of wind turbines on bats tend to be neglected in Environmental Impact Assessments.

However, no national guidelines were formulated or implemented so far, and no awareness was raised of the existence of some unsuitable habitats or sites for the construction of wind turbines at a local, regional and national scale. Improvements on this subject is required.

Resolution 5.2: Bat Rabies in Europe

The passive and active monitoring of bat rabies is ongoing (Van der Poel *et al.* 2005; Takumi *et al.* 2009).

Resolution 5.4: Monitoring Bats across Europe

The Nature Data Authority has agreed to make national data of bat population counts available for the calculation of European trends and indexes of bat populations.

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

The nursery colonies of *Myotis emarginatus* in the monastery Lilbosch and the former nunnery in the village Maria-Hoop have been designated as Natura 2000 sites.

The Government Service for the Cultural Heritage is preparing a leaflet on how to deal with bats living in monuments.

The province of Noord-Brabant financed a survey of bats in attics of churches in 2008.

In 2006 the Ministry of ANF commissioned a survey of functions and conservation possibilities of bats in the 19th century fortress defense line *Nieuwe Hollandse Waterlinie* (New Dutch Waterline) to identify the influence of various human use to the fortress dwelling bat populations (Limpens & Jansen, 2007). The New Dutch Waterline Project Office held an International Conference on military heritage and reconstruction techniques, bats and vegetation.

www.waterliniekennis.nl/pages/programme-tuesday.aspx

www.eurobats.org/news_events/news/pdf/Vleermuizen%20in%20de%20NHWL%20deel%201_%20Synopsis_ENGLISH.pdf

Resolution 5.12: 2008 – Global Year of the Bat

The Global year of the bat has been postponed to 2011-2012.

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