The Agreement on the Conservation of Populations of European Bats

National report 2010 on the implementation of the agreement in Norway

This report covers activities undertaken by Norway since June 2006 to meet its obligations under the Agreement.

A. General information

Name of Party:	Norway
Date of Report:	June 2010
Period covered:	July 2006 – June 2010
Competent Authority:	Directorate for Nature Management P.O. Box 5672 Sluppen, NO-7485 Trondheim, Norway.
Advisory Committee Member:	Norwegian Zoological Society (NZF)
Compilers of report:	Senior Adviser Øystein Størkersen (Directorate for Nature Management) with advice from the Norwegian Zoological Society (Mr. P.O. Syvertsen & Mr. Kjell Isaksen).

B. Status of bats in Norway

1. Summary of species occurring in Norway

Twelve species of bats have now been reliably recorded in Norway, of which one (*Pipistrellus pipistrellus*) has been added since the previous report. At least eight species are known or believed to have regularly reproducing populations, while the remaining are possibly rare or irregular visitors. Two species previously considered possibly extinct have been rediscovered during the report period (*Myotis nattereri* and *Barbastella barbastellus*). Six species were included in the most recent National Red List 2006, while nine were listed in 1999. Of these two were placed in the Near Threatened (NT) category and four in the Data Deficient (DD) category, cf. Kålås et al. (2006). A new and updated red list will be published by the end of 2010.

The following brief description of status and trends for each species recorded in Norway is an update of the review given in the last national report (June 2006):

Myotis mystacinus

Whiskered bat/skjeggflaggermus

Status and distribution of the species is still poorly known. It has been recorded from most counties in southern Norway, north to approximately 63°N on the coast, 62°N in the interior east. Only few colonies have been located. Wintering individuals are found in a number of localities, largely in SE Norway where search for hibernating bats have been most thorough.

Norwegian Red List status 2006: NT - Near Threatened.

Myotis brandtii

Brandt's bat/skogflaggermus (previously brandtflaggermus)

Records are much dispersed over eastern and central Norway, north to approximately 63°50'N. Recent surveys have shown the species to be more common than hitherto acknowledged. Some colonies have been located in central and SE Norway. Wintering individuals are known from several localities in SE Norway.

Norwegian Red List status 2006: Not listed.

M. mystacinus/M. brandtii

Available data on distribution of *M. mystacinus* and *M. brandtii* in Norway show overlap of the two species in eastern Norway, but with a tendency for *M. brandtii* to have a more northern (boreal) distribution than *M. mystacinus*. Field records of unidentified *Myotis*, probably largely this species pair, indicate that occurrence may be more frequent than currently acknowledged.

Myotis nattereri

Natterer's bat/børsteflaggermus

Until the winter 2009/2010 only a few old records existed, the last from Oslo in 1961. Recently rediscovered when a hibernating individual was found in an old mine in SE Norway in January 2010. Status in Norway remains uncertain.

Norwegian Red List status 2006: DD – Data Deficient.

Myotis daubentonii

Daubenton's bat/vannflaggermus

Daubenton's bat is now known to occur sparsely north to approximately 63°45'N in central Norway (i.e. near Trondheim). The species is widespread in sheltered localities along the coast southward from at least 62°30'N. In the interior east of the country it reaches right up to the foothills of the mountains at approximately 62°N. Search for colonies have been relatively limited, but roosts are known from, e.g., bridges and tree hollows. Its winter distribution is still poorly known, due to lack of investigations, and most records are from SE Norway.

Norwegian Red List status 2006: Not listed.

Pipistrellus pygmaeus

Soprano pipistrelle/dvergflaggermus

Distributed over large parts of S Norway, including the interior east where now recorded north to approximately 61°30'N. On the west coast the species is found in sheltered localities north at least to about 62°30'N. It has recently also been encountered in central Norway, at approximately 63°N. Maternity colonies or indications of such are common in houses in S Norway. Hibernation of the species was until recently unknown from Norway, but in February 2007 an estimated 200 individuals were found hibernating in the brick walls of an old barn in SW Norway. Hibernation in Norway, perhaps primarily in buildings, may be more common than hitherto acknowledged.

Norwegian Red List status 2006: Not listed.

Pipistrellus pipistrellus

Common pipistrelle/tusseflaggermus

This species has for some time been suspected to occur in Norway, at least in the southwest. The first definite records were made in 2007, when hunting animals on several occasions were encountered in Stavanger, SW Norway. Analysis of recordings

(by the observer and independently by a panel of international experts) confirmed the presence of the twelfth bat species for Norway. No confirmed records exist so far from other areas in Norway.

Norwegian Red List status 2006: Not evaluated.

Pipistrellus nathusii

Nathusius' pipistrelle/trollflaggermus

First recorded on the west coast in the 1990s, and in recent years confirmed records have been made along the south coast from Bergen to Vest-Agder county. Records exist from April to October. There is also one September record from an oil rig off central Norway, following strong winds from east. Whether records represent migration only, or if a breeding population also exist, is so far unknown.

Norwegian Red List status 2006: DD – Data Deficient.

Nyctalus noctula

Noctule/storflaggermus

First recorded in Rogaland county, SW Norway in 1987 (confirmed in 1995). Since 1992 recorded annually in SE Norway where the species has been encountered north to 62°00' N. Assumed to be breeding and migratory, but no colonies have yet been located.

Norwegian Red List status 2006: DD – Data Deficient.

Eptesicus nilssonii

Northern bat/nordflaggermus

The most common bat species in Norway, distributed over most of the country, frequently also in higher elevated regions and locally common even north of the Arctic Circle (although few records from Finnmark county and perhaps only vagrant north of 69°N). Colonies, often in houses, are widespread. Wintering localities mostly known from underground sites in S Norway, particularly in the SE where most surveys have been carried out, but also north to Nordland county in the north.

Norwegian Red List status 2006: Not listed.

Vespertilio murinus

Parti-coloured bat/skimmelflaggermus

Scattered records along the coast from SE Norway to Trondheim in the north, mostly of displaying males in autumn, with one single vagrant even near the Barents Sea coast. No breeding colonies have as yet been conclusively identified. Probably hibernates regularly in buildings, with the first record made in 1996, but may partly be migratory.

Norwegian Red List status 2006: NT – Near Threatened.

Barbastella barbastellus

Barbastelle/bredøre (previously bredøreflaggermus)

Until recently only four old records were known, all from inner parts of the Oslo Fiord and last in 1949. Rediscovered in December 2007 when a single individual was found hibernating in an old disused water tunnel in Larvik, Vestfold county, SE Norway. The species has wintered here every winter since (with a maximum of two individuals).

Norwegian Red List status 2006: DD – Data Deficient.

Plecotus auritus

Brown long-eared bat/brunlangøre (previously langøreflaggermus)

Widely distributed in S Norway with a few scattered records also from Central Norway (to about 64°N). Roosts have to a large extent been found in churches. Hibernating animals are mainly known from SE Norway with a few records also from the west coast

Norwegian Red List status 2006: Not listed.

2. General population status and population trends

Species	Distribution	Status/pop. trends 2010
M. mystacinus	Widespread	Negative?
M. brandtii	Local/Widespread	Negative?
M. nattereri	Local/Rare	?
M. daubentonii	Widespread	Stable?
P. pygmaeus	Local/Widespread	Stable?
P. pipistrellus	Local/Rare	?
P. nathusii	Local?	?
N. noctula	Local	Stable?
E. nilssonii	Widespread	Stable?
V. murinus	Local	?
B. barbastellus	Local/Rare	?
P. auritus	Widespread	Stable?

Table 1. Summary of distribution and status of all bat species in Norway in 2010. Scant information exist on the status and in particular population trends for the species in Norway, the information in the table is thus only tentative (based on data from NZF)

Most information on bat distribution in Norway result from surveys over the last 15-20 years, and monitoring data for a longer time span is missing. New data on occurrence is likely to be due to increased interest and effort as much as real changes in the populations. This is also reflected in the National Red List, where all listed bat species have been placed outside the group “threatened” (cf. extinct & vulnerable). This is due to the lack of information and uncertainty about their status. The lack of competent personnel in bat research makes the scope for improvement in the knowledge of bats in Norway large. Increased interest and efforts in field surveys in recent years have indeed demonstrated this.

3. Habitats and roosts

A national program for mapping of important sites for all biological diversity (flora and fauna) was initiated in 1998 and still continues all over the country. Identification of important bat sites, be it maternity or wintering sites, are part of the program. The information is used to inform area planners and other sectors involved in the use of the sites. The mapping of important sites is regarded as one of the most important activities by bat researchers in Norway. Current status is far from representing a near-complete coverage of the country, although some effort has been directed to all 19 counties.

Concerning summer roosts buildings of different types is beyond doubt the most important sites containing colonies of large groups of bats. Buildings, including churches, seem to be favoured at least by Northern bats, Soprano pipistrelles and Brown long-eared bats. Winter hibernation sites are mostly known in abandoned mines, probably due to ease of access for researches.

4. Threats

1. The most well known threats in the summer time are against colonies and during the winter by disturbance inside mines or caves.

2. Restoration of old houses and closing of cavities and entrance holes are probably important negative factors in relation to private houses. Removal of bats from houses by

extermination companies were banned in 1981. No exception to the ban has been issued after 1990.

3. General deterioration of the cultural landscape by continued drainage, removal of "waste land" etc. in combination with intense cultivation and use of pesticides has probably contributed much to deterioration of foraging possibilities. Abandonment of grazing in the areas outside of the more intensively cultivated areas has changed the cultural landscape of Norway dramatically in the latter half of the last century. The effects on bat populations can not be ascertained today. A reduction in the occurrence of old trees with cavities suitable as roosts for bats has taken place both in the cultural landscape and in forested areas.

4. The use of chemical treatment on fresh timber has been abandoned, while the use of preservatives on building materials may still be a cause of concern if this is used in parts of houses where bats occur.

5. The disturbance in mines and caves (often unwittingly) can be a serious problem for bats. Closure of winter sites may alleviate the situation. Whether such disturbances have any serious effects on Norwegian populations is not known.

6. General lack of knowledge among the public may in some instances give cause for concern.

5. Data collection, analysis, interpretation and dissemination

The Norwegian Zoological Society (NZF) is the main actor in collection of data on bats in Norway. In this relation the NZF keeps an extensive collection of records. NZF administer nationwide collection of data on all mammals to be published in a national atlas. Public museums all over Norway have the formal responsibility concerning collection of specimen and keeping of records.

C. Measures to implement Article III of the Agreement

6. Legal measures for the conservation of bats and their implementation

The Wildlife Act of 1981 gave total protection to all species of bats. No intentional killing or removal of bats is thus allowed. Nevertheless, every year a number of inquiries on this subject are still presented to the authorities. These are sought solved through advice and consultation with parties concerned, cf. NZF's 24hrs alarm telephone for bat inquiries and a national network of bat specialists. Catching of bats for scientific purposes is not exempt from the Wildlife Act as special permits must be issued by the Directorate for Nature Management (as the national wildlife authority). In the period 2006-2009 eight permits to catch bats for identification and ringing in different studies were issued. One study also included tagging with radio transmitters. Permits to ring bats in low numbers have been given annually, including ringing of bats released after being handled at the national rescue centre. A manual for training and approving of persons ringing bats will be produced.

As part of the nationwide mapping of biological diversity and important sites, a program for protection and proper handling of important sites in relation to all area planning is implemented with the sectors. Guidelines in relation to this are continuously developed.

On June 19th 2009 a new nature protection act was accepted by the Parliament, put into effect from July 1st 2009. One main goal is to increase the protection of rare species and their sites, and fundamental to this is the collation of information and involvement of other sectors. A concrete follow up of this new legislation is the implementation of the new national action plan for bats, a draft of which was produced by the Norwegian Zoological Society in 2009 and which is expected to be approved in 2010/2011.

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

Grilling or locking of caves/mines used by bats are among the most concrete examples of actions in relation to bat protection. However, so far this has been conducted only at two sites, by initiative of the Norwegian Zoological Society (one of which sponsored by the Directorate for Nature Management). In addition conservation measures have been implemented to protect and conserve important maternity colonies in some churches in Norway. These efforts have been conducted in cooperation between involved parties like NGOs, church wardens and government institutions.

8. Consideration given to habitats which are important to bats

The knowledge of bat distributions and status is still too scanty to play an important role in the establishment of nature protection sites, other than being a contributing factor. However, as a follow up of EU's Natura 2000 and the Emerald Network of the Bern Convention, it is expected that important sites for bats may become the focus of conservation measures in Norway in the future.

Initiatives for developing a new national action plan for all species of bats started in 2006. The plan will be finalized in 2010/2011 and will contain a systematic plan for mapping, monitoring and protecting bats in Norway. The plan will be issued by the Directorate for Nature management in collaboration with the Norwegian Zoological Society. In 2010 the following tasks of the action plan will be initiated:

1. Project on mapping and monitoring; strategy and review of existing data.
2. Continued support towards ongoing projects on bat boxes.
3. Monitoring of bat boxes, and issuance of manual on bat boxes
4. Radio telemetric studies to identify new habitats used during winter hibernation
5. Monitoring of underground sites with infrared sensors/camera
6. Bat boxes at important migration sites
7. Research in a large colony of pipistrelle bats
8. Public awareness activities

9. Measures to raise public awareness and bat conservation

The Directorate for Nature Management has given financial support for several annual activities in Norway on public awareness and in relation to bat conservation in general. In particular these activities include:

1. A 24hrs alarm telephone for bat inquiries operated by NZF on a volunteer basis. Many calls have been handled in the report period, of which most were concerns about maternity colonies. These requests also give an opportunity to map colonies and species, and importantly to give best advice on maintenance. Most people react positively to the advice given.

2. The European bat night has become a regular event.

3. Bat-pages on the Internet are continuously updated, cf. www.zoologi.no.

4. Information has been distributed through numerous articles in newspapers and through radio- and TV-interviews.

5. A national rescue centre for injured or disabled bats was established in 2001 near Oslo (operated by NZF) and has frequently been utilised by the media.

6. A small building constructed as a combined maternity and winter site was erected in cooperation with a private enterprise in 2009. The building is a substitute for

a demolished barn previously used as a maternity roost by bats. It is also a visitor centre.

10. Advisory Committee established under Article III.5 of the Agreement

The Norwegian Zoological Society (NZF) was appointed as the Norwegian member of the Advisory Committee in 2001. The society will appoint a representative to the meetings and to conduct intersessional work. Mr. Per Ole Syvertsen has been appointed as such and still acts as the Norwegian representative to the AC. He commenced his work in 2000 and has participated in the AC meetings in Portugal (2001), Romania (2002), Norway (2003), Slovakia (2005), Luxembourg (2006), Hungary (2007), Romania (2008) and Cyprus (2009). Jeroen van der Kooij was the Norwegian representative at the meeting in Lithuania in 2004, and Øystein Størkersen in Germany in 2010.

The Directorate for Nature Management acts as the national management authority coordinator and in relation to issues handled by the Advisory Committee and delegates from Norway.

11. Additional measures for bat conservation

With regard to the national mapping since 1980 of the distribution of vertebrate species (cf. national mammals atlas and mapping of biodiversity project by the municipalities), and evaluation of their important sites, emphasis has been put on dissemination of information to relevant authorities in relation to activities by the local municipalities and the sectors in general. As a further follow up of the Convention on Biodiversity a national mapping programme in each municipality was concluded in 2004 and is still supplemented. Known important sites for bats, be it maternity sites, roosts or feeding areas, will be included. Particular emphasis will be put on the protection of sites with red listed species. A national threatened species unit (Artsdatabanken) was established in January 2006. This unit will focus on collection and maintaining databases and serve as a focus point for information on distribution and population status. The first national red list from this unit was published in 2006.

In relation to resolutions accepted by the Parties at MoPs, the Directorate for Nature Management expects further cooperation in relevant fields with important sectors such as maintenance of cultural heritage sites and road constructors.

12. Existing and planned programmes for bat conservation

Main initiatives have been:

Due to a lack of knowledge of bat distribution and their status in Norway, the emphasis has so far been on the general mapping of the distribution of the different species. A number of County Governors and Municipalities have in recent years sponsored such mapping activities. As a consequence of the decisions made by the Parties to the MoP2 the Directorate for Nature Management has funded an evaluation of the resolutions in relation to national implementation and in particular Res. no. 4 from MoP2 on habitat proposals (published 1999).

In 2006 the Directorate for Nature Management initiated work on a new national action plan for bats. A draft was submitted in 2009 and is expected to be concluded in 2010/2011. The plan will initially be for a five year period. The plan also includes an update of the knowledge on bats in Norway.

13. Activities regarding the effects on bats of pesticides and wood preservatives

No specific instances of harm towards bats due to the use of pesticides or the effects of wood preservatives have been registered in Norway. The current impact of these chemicals is probably low, due to a ban on the use of the most dangerous chemicals. However, if the use of wood preservatives is a source of concern, points of

recommendation should be implemented. More strict regulations on wood preservatives were implemented as of 2003. A separate report on the use of different substances in Norway has been forwarded to a EUROBATS working group. Norway follows the EU directive on chemicals.

The Directorate for Nature Management has contacted the national veterinary authorities relating to the use of antiparasitic drugs for livestock. Apparently the levels of use is low (if any at all).

D. Functioning of the Agreement

14. Cooperation with other Range States

Except participation in international meetings of the Agreement or relevant seminars/symposiums, and activities within intersessional working groups, no specific contact with other Parties or nations have been conducted.

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

Comments on current and relevant resolutions:

MoP2 Resolution No. 2: Consistent Monitoring Methods
No national initiative. Norwegian bat researchers will normally adhere to international standards. A project on selecting consistent monitoring methods will be carried out as part of the new national action plan.

MoP3 Resolution 4: Guidelines for the issue of permits for bat ringing
The Norwegian Zoological Society is working on a manual, which will form the basis for training and licensing of personnel.

MoP4 Resolution 4: Bat conservation and sustainable forest management
The sustainable management of forests is a prerequisite for all planning in the agricultural sector. To aid the sector a brochure on forests and bats has been issued in cooperation with the Ministry for Agriculture (2003).

MoP4 Resolution 5: Guidelines for the use of remedial timber treatment
Norway implements the EU directive on the use of chemical components. Further cooperation with the cultural heritage sector is planned within the new national action plan.

MoP4 Resolution 6: Guidelines for the issue of permits for the capture of wild bats
The guidelines have been the basis for handling of application for exemption from the ban of catching bats for scientific studies.

MoP4 Resolution 11: Recognizing the role of NGOs
The national management authority relies on close cooperation with the Norwegian Zoological Society (NZF) regarding bat issues. The NZF acts as the Norwegian representative to the Advisory Committee.

MoP5 Resolution 2: Bat rabies in Europe
Awareness has been raised among involved bat workers and inoculations offered by the authorities.

MoP5 Resolution 6: Wind turbines and bat populations
The management authority for EUROBATS has included bats in the evaluation programmes for new sites for wind turbines, especially in relation to important migratory corridors. Further research needs to be carried out.

MoP5 Resolution 10: Conservation and management plan 2007-2010

1. Legal requirements: All bats are protected. The new act on protection of biodiversity will improve the situation regarding protection of sites. The act was approved by the Parliament in June 2009.

2. Population survey and monitoring: General mapping of the distribution of bats has continued in the period, and will be a priority in the years to come. A proposal to focus on migratory routes and critical foraging sites has been evaluated and will be a part of the new national action plan for bats (from 2010).

3. Roosts, cf point 2 above.

4. Foraging habitats, cf point 2 above.

5. Promoting public awareness: Much effort has been put into public awareness. Mainly through the use of web pages and interviews with the media (TV, radio and newspapers). The annual bat night has been arranged a number of places each year. A national alarm telephone has been operative, as has a national rescue centre for temporarily disabled bats. Both acts as effective channels for public awareness.

6. Antiparasitic drugs for livestock: Information from the national animal health authority indicates that this is generally not in use. The use of such chemicals will have to follow relevant EU directive.

E. Selected new literature (2006–2010)

Isaksen, K. (ed), Klann, M., van der Kooij, J., Michaelsen, T.C., Olsen, K.M., Starholm, T., Sunding, C.F., Sunding, M.F. & Syvertsen, P.O. 2009. Bats in Norway. Current knowledge and proposal for a national action plan. – *Norsk Zoologisk Forening. Rapport 13*. 124 pp. (In Norwegian with English summary).

Kålås, J.A., Viken, Å. & Bakken, T. (eds) 2006. *Norsk Rødliste 2006 – 2006 Norwegian Red List*. – Artsdatabanken (Norwegian Biodiversity Information Centre), Norway. 416 pp.

Isaksen, K. 2007. Distribution of bats in Hedmark county (Southeast Norway). – *Fylkesmannen i Hedmark, Miljøvernavdelingen (Hedmark County Governor, Department of the Environment), report 2/2007*. 103 pp. (In Norwegian with English summary).

Michaelsen, T.C. & Grimstad, K.J. 2008. Rock scree – a new habitat for bats. – *Nyctalus* (N.F.) 13 (2–3): 122–126.

Michaelsen, T.C., Grimstad, K.J. & Kooij, J. van der 2009. Bat banding in Norway 2004–2009. – *Fauna* 62 (1–2): 32–35. (In Norwegian with English summary).

van der Kooij, J., Redford, K. & Østerby, L.C. & 2009. Natterer's bat *Myotis nattereri* rediscovered in Norway! – *Fauna* 62 (3): 72–79. (In Norwegian with English summary).

Michaelsen, T.C. 2009. First banded bat found and reported by the public in Norway. – *Fauna* 62 (3): 86–88. (In Norwegian with English summary).

Fauna 60 (3–4), 2007: 101–316 (dated 2007, but published in January 2009). A special bat issue of the journal of the Norwegian Zoological Society (contributions in Norwegian, but with English summaries). This issue was distributed to scientific and administrative focal points of EUROBATS. Papers therein include, but are not limited to the following:

Isaksen, K. 2007. The Common pipistrelle *Pipistrellus pipistrellus* recorded in Southwest Norway – a species new to Norway. – *Fauna* 60 (3–4): 120–132.

Kooij, J. van der, Olsen, K.M. & Rigstad, K. 2007. A review of the records of Natterer's bats *Myotis nattereri* in Norway. – *Fauna* 60 (3–4): 133–141.

Flåten, M. & Røed, T. 2007. Barbastelle *Barbastella barbastellus* is not extinct in Norway! – *Fauna* 60 (3–4): 142–144.

Isaksen, K. & Landsgård, M. 2007. The Soprano pipistrelle *Pipistrellus pygmaeus* as a wintering species in Norway. – *Fauna* 60 (3–4): 212–225.

Michaelsen, T.C. 2007. Roost emergence time and light tolerance of Northern bat *Eptesicus nilssonii* and Soprano pipistrelle *Pipistrellus pygmaeus* at 62 °N. – *Fauna* 60 (3–4): 272–279.