

AGREEMENT ON THE CONSERVATION OF POPULATIONS OF EUROPEAN BATS

Report on the implementation of the Agreement in the Slovak Republic

A. General information

Name of Party: Slovak Republic
Date of Report: July 2014
Period covered: May 2010 – July 2014
Competent authority: Ministry of Environment of the Slovak Republic (MoE SR), Division of Nature Protection and Landscape Development, Námestie Ľ. Štúra 1, 812 35 Bratislava 1, Slovakia;
Expert organization established by MoE SR: State Nature Conservancy of the Slovak Republic (SNC SR), Tajovského 28B, 974 01 Banská Bystrica, Slovakia
Compiler of report: Jana Pokrievková & Ján Kadlečík, SNC SR, in cooperation with
Appointed member of the Advisory Committee: Martin Ceľuch, Slovak Bat Conservation Society (SON)

B. Status of bats within the territory of the party

1. Summary details of resident species

No new species for the Slovak Republic have been recorded since the last national report (2010). Currently **28 species** of bats occur in Slovakia.

Rhinolophus ferrumequinum (Schreber, 1774)

Distribution in Slovakia: Especially southern part, but regular findings in the rest of the area of the country (mainly during winter period).

Habitats and roosts: Deciduous forests, forest-steppe habitats, open landscape with pastures, plantations, etc., close to rural settlements and underground sites. Roofs and loft spaces in old buildings (nursery colonies), caves, mines and galleries (hibernacula).

Trends: Stable.

Rhinolophus hipposideros (Bechstein, 1800)

Distribution in Slovakia: Widely distributed, mainly in hilly areas (altitude ca 600-800 m a. s. l.). The species avoid lowland sites.

Habitats and roosts: Deciduous forests, forest-steppe habitats, open landscape with pastures, plantations, etc., close to rural settlements and underground sites. Roofs and loft spaces in old buildings and underground sites (nursery colonies), caves, mines and galleries (hibernacula).

Trends: Increasing.

Rhinolophus euryale Blasius, 1853

Distribution in Slovakia: Isolated population in the south-eastern part of Slovakia (region of the Slovak Karst – Slovenský kras). The population represents a separate territory of the distribution area of the species.

Habitats and roosts: Deciduous forests, forest-steppe habitats, open landscape with pastures, plantations, etc., close to rural settlements. Underground sites – mainly caves – and occasionally roofs

and loft spaces in old buildings (nursery colonies), caves and occasionally mines (hibernacula).

Trends: Insufficient data.

Myotis emarginatus (E. Geoffroy, 1806)

Distribution in Slovakia: Mainly southern and eastern part of Slovakia, occasional records from the north and west regions (especially during winter period).

Habitats and roosts: Open landscape with forests and pastures, plantations close to rural settlements. Roofs and loft spaces in old buildings (nursery colonies), caves, mines and galleries (hibernacula).

Trends: Increasing.

Myotis bechsteinii (Kuhl, 1817)

Distribution in Slovakia: Probably common species of forest habitats, mainly oak and beech forests.

Habitats and roosts: Typical forest species. Hollow trees (nursery colonies), underground sites (hibernacula). Most of the population probably uses hollow trees throughout the year.

Trends: Insufficient data.

Myotis nattereri (Kuhl, 1817)

Distribution in Slovakia: Probably common species of forest habitats.

Habitats and roosts: Typical forest species. Hollow trees (nursery colonies), underground sites (hibernacula). Most of the population probably uses hollow trees throughout the year.

Trends: Insufficient data.

Myotis dasycneme (Boie, 1825)

Distribution in Slovakia: The species occurs especially in the central and eastern part of Slovakia in dependence on presence of the suitable water habitats (feeding areas).

Habitats and roosts: Fishponds and lakes (summer period), natural and artificial underground sites (hibernacula). Only one nursery colony (in the loft spaces) was found in Slovakia (the eastern part).

Trends: Insufficient data.

Myotis daubentonii (Kuhl, 1817)

Distribution in Slovakia: Widely distributed species in Slovakia in dependence on presence of the suitable aquatic habitats (feeding areas).

Habitats and roosts: Typical species of hollow trees. Most of the population probably uses hollow trees throughout the year, during winter period the species uses underground sites too.

Trends: Stable.

Myotis mystacinus (Kuhl, 1817)

Distribution in Slovakia: Widely distributed species in Slovakia, mainly sites with higher altitude and forested landscape.

Habitats and roosts: Typical forest species. Old buildings in forests and loft spaces of churches (nursery colonies), underground sites, mainly caves (hibernacula). The species create very important and numerous winter colony together with *Myotis brandtii* in the Dobšinská ľadová jaskyňa ice cave in Central Slovakia.

Trends: Insufficient data.

Myotis alcathoe Helversen et Heller, 2001

Distribution in Slovakia: New records from Eastern and Southern Slovakia. Species is probably more common.

Habitats and roosts: Probably deciduous forests (summer period).

Trends: Unknown.

Myotis brandtii (Eversmann, 1845)

Distribution in Slovakia: Relatively common species in forest from lowlands to sites with higher altitude.

Habitats and roosts: Typical forest species. Old buildings in forests, probably the hollow trees (summer period), underground sites (hibernacula). See *M. mystacinus*.

Trends: Insufficient data.

Myotis myotis (Borkhausen, 1797)

Distribution in Slovakia: Common and widely distributed species in Slovakia.

Habitats and roosts: Roofs and loft spaces in old buildings, churches, etc. (nursery colonies), underground sites – caves, mines, galleries, cellars (hibernacula). Two nursery colonies have been found in the natural limestone caves. Threatened by extensive restoration of buildings (mostly churches).

Trends: Increasing.

Myotis blythii (Tomes, 1857)

Distribution in Slovakia: Widely distributed species in Slovakia, where is the northern margin of the distribution area of the species.

Habitats and roosts: Open sites and forests as feeding areas. Almost exclusively loft spaces (summer roosts), underground sites – caves, mines, galleries, cellars (hibernacula and one nursery colony).

Trends: No clear trend, generally oscillations in the most abundant hibernacula.

Nyctalus noctula (Schreber, 1774)

Distribution in Slovakia: Widespread species in Slovakia (natural and urban sites).

Habitats and roosts: More common in urban areas than in forests currently. The species use roosts in buildings and hollow trees throughout the year. Especially crevices and roof attics in prefab houses are used. Migrating species, reproduction rare (confirmed at four localities). Threatened by extensive building reconstructions (insulation of buildings). Roosting possibilities are decreasing rapidly.

Trends: Stable.

Nyctalus lasiopterus (Schreber, 1780)

Distribution in Slovakia: Only few specimens were recorded in Slovakia, permanent population found in central Slovakia, on the border with Hungary, in south records females indicate breeding.

Habitats and roosts: The specimens were recorded near water surface in lowland, along the Hron River alluvium and in broad-leaf forests in the south. Habitats and roosts are probably similar with other species of genus *Nyctalus*.

Trends: Insufficient data.

Nyctalus leisleri (Kuhl, 1817)

Distribution in Slovakia: Widespread species in Slovakia.

Habitats and roosts: Typical forest species. The hollow trees (summer period). Winter colonies of this species were not recorded in Slovakia.

Trends: Insufficient data.

Eptesicus serotinus (Schreber, 1774)

Distribution in Slovakia: Common species wide spread in Slovakia.

Habitats and roosts: The roofs and loft spaces of the old buildings (nursery colonies), underground spaces and crevices (hibernacula).

Trends: Stable.

Eptesicus nilssonii (Keyserling et Blasius, 1839)

Distribution in Slovakia: Common species in woodlands with higher altitude.

Habitats and roosts: Typical forest species. The roofs and loft spaces of the old buildings in forests (nursery colonies), underground sites (hibernacula).

Trends: Insufficient data.

Vespertilio murinus Linnaeus, 1758

Distribution in Slovakia: Species occurs in woodlands with higher altitude, in autumn also in cities in lower altitudes.

Habitats and roosts: Typical forest species. The roofs and loft spaces of the old buildings in forests and rock crevices (summer period), fissures and roof attics in buildings, e.g. prefab houses and blocks of flats (autumn and winter period).

Trends: Insufficient data.

Pipistrellus pipistrellus (Schreber, 1774)

Distribution in Slovakia: Common species in Slovakia.

Habitats and roosts: Exclusively the crevices and loft spaces of the old buildings (nursery colonies), underground sites and rock crevices (hibernaculas).

Trends: Insufficient data.

Pipistrellus pygmaeus Leach, 1825

Distribution in Slovakia: Numerous records from southern parts of Slovakia, mostly from lowlands with water bodies.

Habitats and roosts: Insufficient data.

Trends: Insufficient data.

Pipistrellus nathusii (Keyserling et Blasius, 1839)

Distribution in Slovakia: The species occurs especially in lowlands of southern and eastern Slovakia. During migration also in other parts of the country.

Habitats and roosts: Probably the hollow trees or the roosts in buildings.

Trends: Insufficient data.

Pipistrellus kuhlii (Kuhl, 1817)

Distribution in Slovakia: Species recorded for the first time in 2006 in Slovakia. Until now three localities in southern Slovakia recorded.

Habitats and roosts: Insufficient data

Trends: Increasing.

Hypsugo savii (Bonaparte, 1837)

Distribution in Slovakia: Species recorded for the first time in 2005 in Slovakia. Until now more than 10 new localities recorded.

Habitats and roosts: Insufficient data

Trends: Increasing.

Plecotus austriacus (Fischer, 1829)

Distribution in Slovakia: Relatively widespread species in Slovakia, especially lowlands close to rural settlements. There are only few occasional findings during winter period.

Habitats and roosts: Exclusively the roofs and loft spaces of the old buildings (nursery colonies).

Trends: Insufficient data.

Plecotus auritus (Linnaeus, 1758)

Distribution in Slovakia: Common species in Slovakia. Especially in areas with more woodland. There are only few occasional findings during winter period.

Habitats and roosts: The roofs and loft spaces of the old buildings and the hollow trees (nursery colonies).

Trends: Insufficient data.

Barbastella barbastellus (Schreber, 1774)

Distribution in Slovakia: Common species in Slovakia, especially in woodlands.

Habitats and roosts: First nursery colony found in a tree under loose bark. Roosting usually in tree hollows. As hibernacula the species uses underground sites.

Trends: Insufficient data, probably decreasing.

Miniopterus schreibersii (Kuhl, 1817)

Distribution in Slovakia: Very rare species in Slovakia with occurrence in limited number of sites.

Habitats and roosts: Insufficient data. The nursery colonies are known only from south-eastern part of Slovakia (region of the Slovak karst). The summer and winter roosts are exclusively underground sites (caves, mines).

Trends: Increasing.

2. Status and trends

The Red List categorisation for bat species recorded in Slovakia before 2001 was assessed in 2001 National Red List of Mammals (ŽIAK & URBAN 2001). The draft Red List of Carpathian Mammals (including bats) was compiled for the Carpathian region in seven countries (coordinated by Slovak specialists) within the BioREGIO Carpathians project (2011-2014) funded by the EU South East Europe Transnational Cooperation programme (URBAN et al. in press).

Information about trends and status is still limited, but monitoring of bats and habitats is made within special project of SNC SR according to the Article 11 of the Habitats Directive. Most of the data are collected by members of SON and some by the staff members of SNC SR.

In 2013 the assessment of the status of the species according to Article 17 of Habitats Directive was made for reporting to the European Commission. The assessment was made using available data and the expert opinion.

According to this assessment there are still insufficient data for most of the bat species, i.e. the final evaluation of the status is – unknown.

Summary of the assessment of the conservation status of bats in Slovakia (included in the EU Habitats Directive)

Four factors evaluated:

range	R
population	P
habitat	H
future prospect	FP

Biogeographical region:

ALP	Alpine
PAN	Pannonian

Conservation status (CS) reaches the rating:

FV - Favourable

U1 - Inadequate

U2 - Bad

XX - Unknown

Overall assessment of conservation status (CS) according to criteria:

Favourable – All factors evaluated as 'Green' OR three 'Green' and one 'Unknown'

Unfavourable -- Inadequate - One or more 'Amber' but no one 'Red'

Unfavourable -- Bad - One or more 'Red'

Unknown – Two or more 'Unknown' combined with 'Green' OR all 'Unknown'

Species	Biogeogr. region	R	P	H	FP	CS
<i>Barbastella barbastellus</i>	ALP	XX	XX	XX	XX	XX
<i>Barbastella barbastellus</i>	PAN	XX	XX	XX	XX	XX
<i>Eptesicus nilssonii</i>	ALP	XX	XX	XX	XX	XX
<i>Eptesicus serotinus</i>	ALP	FV	XX	FV	XX	XX
<i>Eptesicus serotinus</i>	PAN	FV	XX	FV	XX	XX
<i>Miniopterus schreibersii</i>	ALP	FV	FV	XX	XX	FV
<i>Miniopterus schreibersii</i>	PAN	FV	FV	XX	XX	FV
<i>Myotis alcathoe</i>	PAN	XX	XX	XX	XX	XX
<i>Myotis bechsteinii</i>	ALP	XX	XX	XX	XX	XX
<i>Myotis bechsteinii</i>	PAN	XX	XX	XX	XX	XX
<i>Myotis blythii</i>	ALP	XX	XX	XX	XX	XX
<i>Myotis blythii</i>	PAN	XX	XX	XX	XX	XX
<i>Myotis brandtii</i>	ALP	XX	XX	XX	XX	XX
<i>Myotis brandtii</i>	PAN	XX	XX	XX	XX	XX

<i>Myotis dasycneme</i>	ALP	XX	XX	XX	XX	XX
<i>Myotis dasycneme</i>	PAN	XX	XX	XX	XX	XX
<i>Myotis daubentonii</i>	ALP	FV	XX	XX	XX	XX
<i>Myotis daubentonii</i>	PAN	FV	XX	XX	XX	XX
<i>Myotis emarginatus</i>	ALP	XX	XX	XX	XX	XX
<i>Myotis emarginatus</i>	PAN	XX	XX	XX	XX	XX
<i>Myotis myotis</i>	ALP	FV	XX	U1	XX	U1
<i>Myotis myotis</i>	PAN	FV	XX	U1	XX	U1
<i>Myotis mystacinus</i>	ALP	FV	XX	XX	XX	XX
<i>Myotis mystacinus</i>	PAN	FV	XX	XX	XX	XX
<i>Myotis nattereri</i>	ALP	XX	XX	XX	XX	XX
<i>Myotis nattereri</i>	PAN	XX	XX	XX	U1	U1
<i>Nyctalus lasiopterus</i>	ALP	XX	XX	XX	XX	XX
<i>Nyctalus lasiopterus</i>	PAN	XX	XX	XX	XX	XX
<i>Nyctalus leisleri</i>	ALP	XX	XX	XX	XX	XX
<i>Nyctalus leisleri</i>	PAN	XX	XX	XX	XX	XX
<i>Nyctalus noctula</i>	ALP	FV	XX	U1	XX	U1
<i>Nyctalus noctula</i>	PAN	FV	XX	U1	XX	U1
<i>Pipistrellus kuhlii</i>	PAN	XX	XX	XX	XX	XX
<i>Pipistrellus nathusii</i>	ALP	XX	XX	XX	XX	XX
<i>Pipistrellus nathusii</i>	PAN	XX	XX	XX	XX	XX
<i>Pipistrellus pipistrellus</i>	ALP	FV	XX	FV	XX	XX
<i>Pipistrellus pipistrellus</i>	PAN	FV	XX	FV	XX	XX
<i>Pipistrellus pygmaeus</i>	ALP	XX	XX	XX	XX	XX
<i>Pipistrellus pygmaeus</i>	PAN	XX	XX	XX	XX	XX
<i>Pipistrellus savii</i>	PAN	XX	XX	XX	XX	XX
<i>Plecotus auritus</i>	ALP	FV	XX	XX	XX	XX
<i>Plecotus auritus</i>	PAN	FV	XX	XX	XX	XX
<i>Plecotus austriacus</i>	ALP	FV	XX	XX	XX	XX
<i>Plecotus austriacus</i>	PAN	FV	XX	XX	XX	XX
<i>Rhinolophus euryale</i>	ALP	FV	FV	U1	U1	U1
<i>Rhinolophus euryale</i>	PAN	FV	FV	U1	U1	U1
<i>Rhinolophus ferrumequinum</i>	ALP	FV	FV	U1	XX	U1
<i>Rhinolophus ferrumequinum</i>	PAN	FV	FV	U1	XX	U1
<i>Rhinolophus hipposideros</i>	ALP	FV	FV	U1	XX	U1
<i>Rhinolophus hipposideros</i>	PAN	FV	FV	U1	XX	U1
<i>Vespertilio murinus</i>	ALP	XX	XX	XX	XX	XX
<i>Vespertilio murinus</i>	PAN	XX	XX	XX	XX	XX

3. Habitats and roost sites

Roosting opportunities in buildings are decreasing. Old buildings with loft spaces are restored and closed for animal access and prefab houses are insulated. Numerous roosts and roosting opportunities are destroyed. Other sites (subterranean habitats) are subject of increasing visitation and disturbance and old mines are buried. Foraging opportunities in forests are limited and in some parts of spruce forests polluted by using of pesticides in the forest management during last years, because of bark beetle expansion.

4. Threats

The major factors with negative influence on bats in Slovakia are:

- 1) Extensive insulation of prefab buildings, roosting opportunities already reduced roughly in 30% in three years.
- 2) Renovation and restoration of roofs and loft spaces in old buildings (mostly churches). Due to more funding possibilities (EU funds) and economic development, the increasing number of maternity colonies of bats are threatened by this factor.
- 3) Unsuitable methods of forest management with use of pesticides for bark beetle control, harvesting also in protected areas, no dead wood left after harvesting etc.
- 4) Unsuitable methods of blocking (in some cases even destroying) of caves, old abandoned mines, etc.
- 5) Disturbance by human activities (road construction, development projects, collecting of minerals in caves, etc.).

5. Data collection

Data are collected occasionally by SNC SR professional staff (including the Slovak Caves Administration active in the support of the monitoring), but mostly by members of non-governmental organisations (e.g. SON, Slovak Union of Nature Conservationists Group *Miniopterus*, local groups of the Slovak Speleological Society, DAPHNE – Institute of Applied Ecology, etc.) in different overground and underground habitats (winter and summer surveys).

Members of SON cooperate on a bat-banding as well; data are provided to a central database in the Slovak Bat Ringing Centre (since 2003). Eight people are licensed for banding, which is usually used in research projects or voluntary surveys.

The scientific research is performed especially in the Institute of Forest Ecology of the Slovak Academy of Sciences in Zvolen, Faculty of Natural Sciences of Comenius University in Bratislava, Faculty of Natural Sciences of Matej Bel University in Banská Bystrica, Faculty of Natural Sciences of P. J. Šafárik University in Košice, East Slovakian Museum in Košice etc.

C. Measures taken to implement Article III of the Agreement

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

The Act No. 543/2002 on Nature and Landscape Protection and the Order No. 24/2003 as an executive regulation of the Act were updated several times during the reporting period, including paragraphs on animals and their habitats protection and on protected areas conservation and management. Updated was also the Act No. 326/2005 on Forests. Updating of legal regulations on some important protected areas for bats (including caves as Nature Monuments, National Nature Monuments and their buffer zones) was made every year.

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

SNC SR is working on the process to designate protected areas covering all Natura 2000 sites. Since last report 97 new or extended Natura 2000 sites have been submitted including sites important for bats. Buildings with bat roosts are generally not included in this network.

After the revision, 21 new underground sites were identified as of international importance for bats, six of them are included in Natura 2000 sites (SKUEV0112 Slovenský raj, SKUEV0256 Strážovské vrchy, SKUEV0302 Ďumbierske Tatry, SKUEV0328 Stredné Pohornádie, SKUEV0347 Domicke škrapy, SKUEV0356 Horný vrch) having total 84 underground sites on the list of sites of international importance submitted to the Secretariat.

8. Consideration given to habitats which are important to bats

- SON in cooperation with other organisations works on a project *Protection of Common Swift (Apus apus) and bats in buildings in Slovakia" supported by LIFE+ programme*, aimed at conservation of bats in buildings under reconstruction or insulation, with a series of workshops and conferences organized.
- Consultancy network was built to help builders in case of finding a bat roost during reconstruction, information is also on the [web site \(http://www.netopiere.sk/ochrana/netopiere-na-sidliskach/\)](http://www.netopiere.sk/ochrana/netopiere-na-sidliskach/).
- SNC SR staff members and SON members assisted in reconstruction of some buildings important as bat roost, bat boxes are installed.
- Two projects of SON were devoted to bat conservation in old and abandoned mines (Bat conservation in the old mines of Slovakia - CMS Small Grants Programme; Protection of Bat Population in Abandoned Mines of Revucka Highlands – GEF Small Grants Programme, implemented in 2014 – 2014).

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

- Non-governmental organisations provide information about bats and need for their conservation on their web sites (www.netopiere.sk, www.miniopterus.sk) and Facebook group.
- The Chiropterological seminars were organized in 2012 and 2014 in cooperation with different NGOs, Institute of Forest Ecology of the Slovak Academy of Sciences, SNC SR and administrations of protected areas.
- The International Conference on the Protection of birds and bats during insulation and reconstruction of buildings was organised in 2012 within the project “Protection of Common Swift (Apus apus) and bats in buildings in Slovakia”. The main topic of the Conference was birds and bats in the cities and how to protect them.
- SNC SR, SON, Miniopterus NGOs organised public events within the European Bat Nights.
- Members of SON in co-operation with the SNC SR cleared guano from the attics of some churches.
- SNC SR and SON prepared a number of press and television reports.
- The conference "Research and conservation of Mammals in Slovakia" was organised in 2011 and 2013. The aim of the conference is to present current research results on Mammals, including bats in Slovakia, as well as projects carried out by different organisations.

- Atlas of mammals of Slovakia was published in 2012.
- SON in co-operation with SNC SR organised workshop with the topic "Old mines and their importance for conservation of biodiversity", where all interested organizations and authorities participated. (The workshop was organised within the projects "Protection of Chiropterans Population in Abandoned Mines of Revucka highlands" and "Bat conservation in the old mines of Slovakia").
- During the school year 2013–2014, the state enterprise State Forests of TANAP in cooperation with SON organised various educational events for schools with focus on topics concerning bats.
- The seminar “Chiroptera minimum or getting to know the bats” was organised by SON in cooperation with Slovak zoological organization.

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

SNC SR as an expert organization established by MoE SR, together with SON (on voluntary basis) provide advice on bat conservation and management and their support will be organized for the next reporting period.

11. Additional action undertaken to safeguard populations of bats

Administrations of the SNC SR, NGO SON and Miniopertus provided consultations and takings of found and handicapped bats during last years, together with other relevant organizations.

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.

- Project “Support of the European cooperation in bat conservation” supported by German foundation Deutsche Bundesstiftung Umwelt was implemented in 2010.
- "Preparation and implementation of monitoring of habitats and species and improving the disclosure of information to the public” – ERDF funded project of SNC SR, aimed at monitoring of 66 habitat types, and of animal and plant species (including bats) of European interest. Within the project new database on the monitoring is created, as well as various guidelines focused on the monitoring of biodiversity.
- "Protection of Common Swift (*Apus apus*) and bats in buildings in Slovakia" supported by LIFE+ programme, implemented in 2012 – 2015
Main objectives of this ongoing project are to halt the recent decline of the common swift (*Apus apus*) and noctule bat populations in Slovakia, and to protect their nesting/roosting. A series of actions are implemented, targeting the installation of artificial

nesting/roosting facilities and the provision of training and guidance on habitat loss prevention and on the importance of the species conservation.

- “Bat conservation in the old mines of Slovakia (CMS Small Grants Programme, implemented in 2012-2014) - the project is focused on the identification of old mines important as bat habitats and to create and suggest possible solutions for their protection. The project is carried out by SON in cooperation with Pavol Jozef Šafárik University in Košice.
- "Protection of Chiropterans Population in Abandoned Mines of Revucka Highlands" (GEF Small Grants Programme, implemented in 2014 – 2014) - the main aim of the project is the protection of biodiversity in the areas of old mines. The goal is to secure mines and preserve significant biodiversity objects and eliminate negative impacts of old mines on the biodiversity. The local community contributed to the elimination of negative impacts, while its aim in this area is to create space for economic activities based on exploitation of biodiversity for tourism development. A complementary goal is to improve activities and initiatives to prevent the utilization of pesticides. The area without usage of pesticides would be determined based on usage of areas by population of chosen species of bats.
- "Monitoring of the chosen pathogens inside the insectivore bat population in the Slovak Republic" - research is conducted by University of Veterinary Medicine and Pharmacy in Košice and it is supported by Science Grant Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic (VEGA). The research is focused on ecological and epizootical connection within the occurrence of the Lyssavirus. Examination occurred in the insectivore bat populations of the species *Eptesicus serotinus*, *Pipistrellus pipistrellus*, *Myotis myotis*, *Myotis emarginatus*.
- "Population biology and ecology of Mediterranean Horseshoe bat (*Rhinolophus euryale*; Mammalia: Chiroptera) on the edge of its range“- research is conducted by Pavol Jozef Šafárik University in Košice and it is supported by VEGA. Mediterranean horseshoe bat (*Rhinolophus euryale*) creates in Slovakia and Hungary an isolated population on its range margin with data lacking on population structure and further characteristics. The aims of the project are species range characterisation in Slovakia with emphasis on marginal records; feeding ecology and foraging strategy description, definition of population-ecological characteristics (population structure, host-parasitic relationships, and phenology data).
- “Social behaviour and relations of tree-dwelling bats” – research is conducted by the Institute of Forest Ecology of the Slovak Academy of Sciences in Zvolen and it is supported by VEGA. The project objective is to examine social structure and spatio-temporal distribution of subunits within a local population of *Nyctalus leisleri*. The other objective is to find factors explaining variability of behavioural displays during dawn swarming – a behaviour which is associated with roost site selection or strengthening of social bounds in tree dwelling bats. Detailed knowledge about social factors in the roost-site selection and principles of forming social groups in tree-dwelling bats will be useful in effective species and habitats protection.

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 substantial progress.

D. Functioning of the Agreement

14. Cooperation with other Range States

There is very successful co-operation with specialists from the Czech Republic, Hungary, Poland, Germany, United Kingdom, Romania etc. There is also very good communication with specialists and volunteers from other European countries.

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

Resolution 4.3 – Guidelines for the Protection and Management of important Underground Habitats for Bats

The list of important underground sites for bats was revised, complemented and submitted to the Secretariat.

Resolution 4.6 – Guidelines for the Issue of Permits for the Capture and Study of Captured wild Bats

A draft of the rules for capture and ringing of wild bats exists. Individual permits are considered by the nature conservation agency and granted by nature conservation authorities. the

Resolution 5.2 – Bats and Rabies in Europe

A research on bats and rabies started at University of Veterinary Medicine and Pharmacy in Košice, where blood samples from bats are analysed.

Resolution 5.4 – Monitoring Bats across Europe

Monitoring of bats is included in the national project "Preparation and implementation of monitoring of habitats and species and improving the disclosure of information to the public" implemented by SNC SR. Different scientific institutions and NGOs and involved in international programmes.

Resolution 5.7 - Guidelines for the Protection of Overground Roosts, with particular reference to roosts in buildings of cultural heritage importance

- Workshops and conferences were organized for different stakeholders to promote procedures before and during building reconstruction activities (insulation of prefab buildings and renovation of historical buildings).
- Consultancy network was built to help builders in case of finding a bat roost during reconstruction, information is also on the [web site](#).
- Help to flat and house owners and consultations provided to the buildings owners and users in cases of bats occurring in prefab and other houses (almost in all larger towns) are increasingly frequent in the work of SNC SR and relevant NGOs and specialists.

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

According to the present information *Geomyces destructans* was not found in Slovakia. However bat workers and speleologists are informed about this fungal infection. SON dedicated part of their webpage to improve the public awareness of this infection. (<http://www.netopiere.sk/ochrana/syndrom-bieleho-nosa/>)

Resolution 6.7: Conservation and Management of Critical Feeding Areas, Core Areas around Colonies and Commuting Routes

Research and monitoring of feeding areas and commuting routes was made during projects of SON.

Resolution 6.8: Monitoring of Daily and Seasonal Movements of Bats

Monitoring of the bat seasonal migration is included in the projects and activities focused on the observation of the bats in the different habitats. (See ongoing projects in the point 12.)

Resolution 6.9: Year of the Bat

The promotion of the Year of the Bat was mainly held during the events organised within The International Bat Night. During those events, the materials created for the Year of the Bat were distributed.

Resolution 6.10: Synergies between the Agreement and Other European Treaties for Nature Conservation

The Slovak Republic supported cooperation especially with the Framework Convention on the Protection and Sustainable Development of the Carpathians (Carpathian Convention) e.g. within the SEE Transnational project BioREGIO Carpathians (development of Red Lists of Carpathian species and habitats).

Resolution 4.7, Resolution 5.6 and Resolution 6.11: Wind Turbines and Bat Populations

The Regulation of the MoE SR No. 3/2010-4.1. on standards and limits for location of wind turbines and wind farms on the territory of the Slovak Republic was adopted in 2010 is a guidance for environment authorities at all levels (http://enviroportal.sk/oze/files/SMERNICA_MZP_VE_VP.pdf). This includes limits also considering sites important for bats (and birds), including their wintering sites and migration routes, protected areas or sites of international importance. The standard requirements of the environment authorities for the environmental impact assessment process include also the bats survey during at least one year and monitoring of fauna minimum one year after the construction of the wind turbine. The EUROBATS Guidelines for consideration of bats in wind farm projects were translated into Slovak language and will be a part of a catalogue of limits. SON also prepared the publication “Wind farms and bats” for various target groups, which specifically focuses on the wind farm impacts toward bats, proposes solutions and evaluate the location of wind farms in Slovakia.

Resolution 6.12: Bat Conservation and Sustainable Forest Management

Based on the updated nature conservation law, forestry law and obligations of the Habitats Directive a special guidance on bat conservation and forest management will be developed in the next reporting period.

Resolution 6.13: Bats as Indicators for Biodiversity

Bats and their habitats have an important position in the Priority Action Framework for

Financing of Natura 2000 in the Slovak Republic for the EU Programming Period 2014-2020 and in new Operational Programme Quality of Environment, as well as in the newly developed Action Plan for implementation of measures of the Updated National Biodiversity Strategy.

Resolution 6.14: Impact of Roads and Other Traffic Infrastructures on Bats

In the case of reconstruction and building of new roads (especially motorways) the presence of the bats has been taken into account during the planning process and Environmental Impact Assessment procedures.

Resolution 6.15: Impact on Bat Populations of the Use of Antiparasitic Drugs for Livestock
No specific activities so far.

Resolution 6.16: Implementation of the Conservation and Management Plan (2011-2014)

Implementation of priorities:

1. Legal Requirements: (a) Measures have been taken in national legislation and in implementation of the EU habitats Directive;

2. Population Survey and Monitoring: (a) Data are collected within the newly established Comprehensive Information and Monitoring System (KIMS) of SNC SR.

(b) Sharing of information on experience gained will be relevant after testing phase of the KIMS during next reporting period;

(c) Information on bat movements are collected within projects of SON using radio telemetry.

(d) *Rhinolophus euryale* was subject of the revision of its occurrence in the Carpathian region (UHRIN et al. 2012) and *Miniopterus schreibersii* of the two projects of SON in the region with old and abandoned mines resulting in new data on population, occurrence and dispersal of this species in southern Slovakia;

f) Status of the bat fauna has been assessed in reporting process according to Article 17 of the Habitats Directive;

(g) Wind turbines are not wide spread and developed so far within the country, but the Regulation of MoE SR of 2010 was produced (see above);

(h) Bats are included in the national planning documents and Action Plans and will be proposed as one of indicators in the new nature conservation strategy (under development);

3. Roosts

(b) The list of internationally important underground sites for bats was revised and updated and submitted to the Secretariat;

4. Habitats

(a) Surveys to identify critical feeding areas are very scarce and insufficient data are available so far;

5. Promoting Public Awareness of Bats and their Conservation and Providing Advice

(a) – (c) Raising of public awareness and education is a part of daily work of SNC SR and of relevant NGOs, especially SON and many activities have been implemented during the reporting period, including the Year of the Bat;

6. Pesticides

(a) Small progress, activities in the beginning;

7. International co-operation

(a) Cooperation developed especially within the Carpathian countries and the Carpathian Convention;

8. Diseases

(a) Research is provided by the University of Veterinary Medicine and Pharmacy in Košice;

9. EUROBATS Projects Initiative (EPI)

There has not been voluntary contribution of the Slovak Republic to the EPI.

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