



REPUBLIKA SLOVENIJA

MINISTRSTVO ZA OKOLJE IN PROSTOR

www.mop.gov.si, e: gp.mop@gov.si

Dunajska cesta 48, 1000 Ljubljana

t: 01 478 74 00, f: 01 478 74 22



The Agreement on the Conservation of Populations of European Bats EUROBATS

National implementation report for Slovenia 2006 - 2010

A. GENERAL INFORMATION

Name of Party: Republic of Slovenia

Date of accession to the Agreement: 5 December, 2003

Date of Report: 23.6.2010

Period covered: 2006 - 2010

Competent Authority: Ministrstvo za okolje in prostor (Ministry of the Environment and Spatial Planning)

Appointed Member of the Advisory Committee: Primož Presetnik.

Membership of other committees/working groups: IWG on Producing Guidelines on Bat Monitoring Methods to Assess Population Trends at Different Levels, IWG on Protection of Overground Roosts, IWG on Autecological Studies for Priority Species, IWG Bats as Indicators, WG to prepare a new Conservation and Management Plan for MoP5, IWG Impact of Roads and other Traffic Infrastructure, IWG Ethical Practices, IWG EUROBATS Projects Initiative

B. STATUS OF BATS IN SLOVENIA

1. Summary Details of Resident Species

30 bat species has been recorded in Slovenia (Tab.1), however in the last decades 28 of them have been regularly observed (Presetnik et al. 2009a).

Rhinolophus blasii is considered extinct and for *Nyctalus lasiopterus* there is just one app. 85 years old record. In 2007 *Myotis alcathoe* was found in Slovenia (Presetnik et al. 2007). Quite possible is presence of *Plecotus kolombatovici* and perhaps *Tadarida teniotis* and *Myotis dasycneme*.

Table 1. List of bat species recorded in Slovenia and their conservation status.

Red list – Rules on the inclusion of endangered plant and animal species in the Red List. Official Gazette of the Republic of Slovenia No. 82/02. (Ex – Extinct, E – Endangered, V – Vulnerable, R – Rare, O – Least concern; K – Data deficient)

N2k – Decree on special protection areas (Natura 2000 areas). Official Gazette of the Republic of Slovenia No. 49/04.

Monitoring – established monitoring scheme (Presetnik et al. 2007, Presetnik & Podgorelec 2008a)

Species		Red List	No. of pSCI (N2K)*	Evidence of		Monitoring
Scientific name	Slovenian name			breeding	wintering	
<i>Rhinolophus hipposideros</i>	mali podkovnjak	E	47	Yes, numerous	Yes, numerous	Yes
<i>Rhinolophus ferrumequinum</i>	veliki podkovnjak	E	13	Yes, numerous	Yes, numerous	Yes
<i>Rhinolophus euryale</i>	južni podkovnjak	E	9	Yes, common	Yes, common	Yes
<i>Rhinolophus blasii</i>	Blasijev podkovnjak	Ex	/	/	/	/
<i>Myotis myotis</i>	navadni netopir	E	12	Yes, numerous	Yes, numerous	Yes
<i>Myotis blythii</i>	ostrouhi netopir	E	1	Yes, rare	Yes, rare	Yes
<i>Myotis bechsteinii</i>	velikouhi netopir	E	2	Yes, rare	Yes, rare	Yes
<i>Myotis nattereri</i>	resasti netopir	V	-	Yes, rare	Yes, rare	Yes
<i>Myotis emarginatus</i>	vejicati netopir	V	10	Yes, numerous	Yes, rare	Yes
<i>Myotis mystacinus</i>	brkati netopir	O1	-	Yes, rare	Yes, rare	Yes
<i>Myotis alcathoe</i>	nimfni netopir	/	-	No	No	Yes
<i>Myotis brandtii</i>	Brandtov netopir	R	-	No	No	Yes
<i>Myotis capaccinii</i>	dolgonogi netopir	E	5	Yes, common	Yes, common	Yes
<i>Myotis daubentonii</i>	obvodni netopir	O1	-	Yes, rare	Yes, rare	Yes
<i>Pipistrellus pipistrellus</i>	mali netopir	O1	-	Yes, rare	Yes, rare	Yes
<i>Pipistrellus pygmaeus</i>	drobni netopir	K	-	Yes, rare	Yes, rare	Yes
<i>Pipistrellus nathusii</i>	Nathusijev netopir	V	-	No	Yes, rare	Yes
<i>Pipistrellus kuhlii</i>	belorobi netopir	O1	-	Yes, common	Yes, rare	Yes
<i>Hypsugo savii</i>	Savijev netopir	O1	-	Yes, rare	No	Yes
<i>Eptesicus serotinus</i>	pozni netopir	O1	-	Yes, common	Yes, rare	Yes
<i>Eptesicus nilssonii</i>	severni netopir	V	-	Yes, rare	No	Yes
<i>Nyctalus lasiopterus</i>	veliki mračnik	K	-	No	No	/
<i>Nyctalus noctula</i>	navadni mračnik	O1	-	Yes, rare	Yes, rare	Yes
<i>Nyctalus leisleri</i>	gozdni mračnik	V	-	No	No	Yes
<i>Vespertilio murinus</i>	dvobarvni netopir	V	-	Yes, rare	Yes, rare	Yes
<i>Plecotus auritus</i>	rjavi uhati netopir	V	-	Yes, rare	Yes, rare	Yes
<i>Plecotus macrobullaris</i>	usnjebradi uhati netopir	(V)	-	Yes, common	Yes, rare	Yes
<i>Plecotus austriacus</i>	sivi uhati netopir	V	-	Yes, rare	Yes, rare	Yes
<i>Barbastella barbastellus</i>	širokouhi netopir	V	3	Yes, rare	Yes, numerous	Yes
<i>Miniopterus schreibersii</i>	dolgokrili netopir	E	7	Yes, rare	Yes, common	Yes

2. Status and Trends

Presetnik et al. (2007, 2008, 2009a, b, c) have given estimation on numbers of some bat species and also on their trends (Tab. 2) and have suggested that *R. ferrumequinum* and *M. myotis* should be treated as species with unfavourable conservation status.

The lack of older data prohibits estimations of populations' trends for majority of bat species in Slovenia. However continuation of monitoring scheme (Presetnik et al. 2007, Presetnik & Podgorelec 2008a) will till MoP7 enable at least estimation of populations "at the start of monitoring scheme" for some additional bat species, and for some species also estimation of their population trends

Tab. 2. Estimated population size and trends for some bat species in Slovenia.

Scientific name	Estimated no.	Population trends	Source of estimation	Reasons of decline
<i>Rhinolophus hipposideros</i>	24.000 -33.000	Growing (expert judgement)	Counts at hibernacula	-
<i>Rhinolophus ferrumequinum</i>	2.000-3.000	Decline; < 5% annually (statistical significant)	Counts at hibernacula	Unknown. (perhaps degradation of summer roosts)
<i>Rhinolophus euryale</i>	500 - 1000	Declining? (expert judgement)	Counts at maternity roosts	Destroyed attic roost which harboured 10-20% of E Slovenian population.
<i>Myotis myotis</i>	10.000 - 30.000	Declining? (expert judgement)	Counts at maternity roosts	16% of known maternity roost were destroyed (app. 7 % of population disappeared)
<i>Eptesicus serotinus</i>	/	Declining? (expert judgement)	Counts at maternity roosts	15% of known maternity roosts were destroyed.
<i>Miniopterus schreibersii</i>	10.000	Stable? (expert judgement)	Counts at hibernacula	-

3. Habitats and Roost Sites

Caves and buildings were main focus of past and current field research (Presetnik et al. 2007, 2009c). Some additional basic inventarisation were carried out, and some newly found roosts were included in monitoring schemes. Microclimate conditions in roosts were often recorded during such research.

Bats in foraging habitats were investigated by occasional mistnetting and bat detector work. However the fact still remains that forests as predominately land cover (55,5%) are poorly researched (Presetnik & Grobelnik 2004, Presetnik & Govedič 2006). Also in this period of reporting, no research of foraging habitats was carried out with aid of radio telemetry or light tags.

4. Threats

Mayor threats for bats in Slovenia are destruction or degradation of roost sites by unsuitable renovation of old buildings or increasing speologist tourism.

Destruction or degradation of potential foraging, and commuting habitats probably happens to, however no detailed information on this exist. All mayor construction projects require environmental impact assessment where bats are often included.

Occasionally direct killing of bats still occurs, however it seems this are rare events that do not threaten bat populations on general

5. Data Collection, analysis, interpretation and dissemination

Data on bats are collected mainly by i) Centre for Cartography of Fauna and Flora (CKFF), ii) by members of Slovene Association for Bat Research and Conservation – SDPVN and iii) Slovene Natural History Museum.

CKFF has carried out two large-scale projects *Monitoring of target bat species populations* commissioned by Ministry of environment and spatial planning (2006-2009, Presetnik et al. 2007, 2009c) and financing of follow up project for the period 2010 and 2011 was obtained. Additionally, many data on bats were collected in a frame work of INTERREG III A Slovenia-Austria project *Conservation of Amphibians and Bats in the Alps-Adriatic Region* (2005-2007) and by *Surveillance for lyssaviruses in bats* commissioned by The Veterinary Administration of the Republic of Slovenia, Ministry of Agriculture, Forestry and Food (Presetnik & Podgorelec 2008b, Presetnik et al. 2009b).

Presetnik et al. (2009a) published monograph *Atlas of the bats (Chiroptera) of Slovenia*, where more detailed analysis of all data collected in past 100 years with emphasis on last decade are presented and Presetnik (2007) published Register of important bat roosts in northern Slovenia.

C. MEASURES TAKEN TO IMPLEMENT ARTICLE III OF THE AGREEMENT

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

All species of bats in Slovenia are included in *Rules on the inclusion of endangered plant and animal species in the Red List* (Official Gazette of the Republic of Slovenia No. 82/02, see. Table 1) and are therefore protected by the *Decree on protected wild animal species* (Official Gazette of the Republic of Slovenia No. 46/04 and 110/04). In 1998 Slovenia ratified the *Bonn Convention* (Ur. L. RS 72/98, MP 18) and in 1999 the *Bern Convention* (Ur. L. RS 55/99, Mednarodne pogodbe, št. 17). The *EUROBATS Agreement* was ratified in 2003 (Official Gazette of the Republic of Slovenia MP No.22-68/2003).

As for bats caves are very important and there are over 10.000 registered caves in Slovenia, legal measures for caves has to be taken onto account, as well. In *Cave Protection Act* (Official Gazette of the Republic of Slovenia No. 2/04) there is a provision (Art. 19) prohibiting any activities which could lead to deliberate destruction or disturbance of any animal species in the cave. In case that the caves are opened for tourist visit, manager or concessionaire has to take into account cave animal species.

Decree on special protection areas (Natura 2000 areas) (Official Gazette of the Republic of Slovenia No. 49/04) entered into force on 1st May 2004 when Slovenia became a full member of the European Union. For ten bat species, 67 SCI have been designated (Tab. 1). Alpine (Kranjska Gora, Slovenia, May 2005) and Continental biogeographic seminars (Darovansky Dvur, Czech Republic, April 2006) concluded that some corrections of data are necessary. In some cases additional bat species have to be included in the SCI while for some species new SCI have to be designated.

Violations of provisions of the Nature Conservation Act (NCA) related to protected species of wild fauna (taking from the wild, disturbance, trade, breeding, acquisition of specimens, keeping in captivity and introduction or repopulation of animals or plants into the natural environment etc.) are treated as offences. The NCA prescribes the amounts of fines for such violations.

A fine in accordance with Art 160 is imposed on a legal person or individual who:

- exterminates a plant or animal species;

- reduces the number of plants or animals of individual populations, reduces their habitats or worsens their living conditions to such an extent that the species becomes endangered;
- intentionally, without a justifiable cause, destroys or damages habitats of plant or animal species populations;
- does not use plants or animals in compliance with the prescribed conditions;
- uses plants or animals whose use is prohibited or uses them contrary to the prescribed restriction of use;
- introduces plants or animals of non-indigenous species without permission;
- breeds animals of indigenous or non-indigenous species without a permit;
- acts contrary to the protection regime prescribed by the Government for plant or animal species protected pursuant to the ratified international treaties;
- acts contrary to the prescribed guidelines for maintaining a species at a favourable status.

Table 2. The fines for offences according to Article 160 of the NCA Fine (in EURO)	Imposed on
4,160 – 41,600	legal person
1,000 - 20,800	individual
200 - 2,000	responsible person of a legal entity

After the infringement from the EU Commission in 2008, regarding protection of maternity roosts of *R. euryale* in cave Ajdovska jama, cave was temporarily protected with *Rules prohibiting activities threatening protected bat species in Ajdovska jama near Nemška vas* (Official Gazette of the Republic of Slovenia No. 53/08) by which it was prohibited for tourist to enter the cave between 15th of April and 31st October. Although the Rules expired and no manager of the cave was officially chosen, strict regime of visiting is maintained.

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

All available data was collected in frame work of CKFF projects *Monitoring of target bat species populations* (Presetnik and al. 2007, 2009c) and updates were submitted to national conservation authorities 3 times per year. Each year the SDPVN also informs the Environmental Agency (ARSO) of newly discovered important roosts of bats.

For implementation of *Resolution No. 2.4, Element 2: Bat Habitats, Underground Habitats (Bonn 1998)* and *Resolution No. 4.3 Guidelines for the Protection and Management of Important Underground Habitats for Bats (Sofia 2003)*, updated list of important underground sites was prepared in 2010 and caves are also included in the *Register of important bat roosts in northern Slovenia* (Presetnik, 2007).

8. Consideration given to habitats, which are important to bats

Currently, there are no particular management plans focused only on bats in Slovenia. The conservation of bat populations is achieved through different sectoral policies (eg. forestry, environment etc). In Slovenia, due to its forest cover (app. 55 %), sustainable forestry is of major importance for habitat protection. The *Rules on protection of forests* (Official Gazette of the Republic of Slovenia No.92/2000) regulate the use of forest in a manner to maintain the biological balance of forest ecosystem. The management of forest should protect rare and endangered species and their habitats. The exploitation of forest should be adopted to these conditions. As one of the measures, the Rules prescribe that old and dead trees should be left in the forest and as far as possible be evenly distributed.

In 2007 Government of RS has accepted “Operational programme - Natura 2000 management programme” – in which are included also provisions for bat conservation.

Decree on limit values due to light pollution of environment (Official Gazette of the Republic of Slovenia No.81/2007) in 12 article states: “If, in accordance with the regulations governing the conservation of nature, the illuminated building or facility is protected as habitat of endangered species habitat, the area of bat entrance hole in such building or structure, may not be lighted”.

SDPVN (2009) carried out project *Bats in trees* in urban areas (co financed by Municipality of Ljubljana).

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

SDPVN (www.sdpvn-drustvo.si) is organising lectures for interested public on bat biology and conservation and cooperated with CKFF campaign to raise public awareness in framework of INTERREG IIIA Slovenia –Austria, *Conservation of Amphibians and Bats in the Alps-Adriatic Region*. SDPVN is also coordinating European Bat Night, which is usually held in second weekend in September. Event has become quite popular and more and more organisations are joining the event.

Biology students’ society (<http://dsb.biologija.org>) is organising spring and summer research camps where bat group are led by experts and this forms a basic education for new bat workers. Similar camps are organised for pupils by Institute Rdeči Apolon (www.rdeci-apolon.si/) and also the Societas herpetologica Slovenica – Society for the study of Amphibians and Reptiles (www.herpetolosko-drustvo.si).

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

No particular body nominated. The SDPVN, CKFF and *Natural History Museum* are acting as advisory bodies. State inspection has to follow breaching of the Nature Conservation Act (including decrees) and Cave Protection Act.

11. Additional action undertaken to safeguard populations of bats.

The Ministry of the Environment and Spatial Planning approved a financial support for a three – 2-year projects (2006-07, 2008-09, Presetnik et al. 2007, Presetnik 2009c) and the last one is in progress.

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.

Ministry of Environment and Spatial planning has commissioned 2 year project (2006-07) *Monitoring of target bat species populations*, where monitoring scheme for all bat species were defined, along with standard monitoring protocols (Presetnik et al. 2007). Project continued in years 2008-2009 (Presetnik et al. 2009c), and will continue in 2010-2011.

Ministry for defence has commissioned project *Nature conservation values of military areas* (Naravovarstvena vrednost vojaških območij), where bats are included in research.

INTERREG IIIA Slovenia –Austria, *Conservation of Amphibians and Bats in the Alps-Adriatic Region* was carried out Centre for Cartography of Fauna and Flora (<http://www.ckff.si/projekti/interreg/>) and its partner Slovene Association for Bat Research and Conservation – SDPVN. The goals of the project was extensive bat conservation measures for summer and winter roosts as well as for foraging habitats: conservation of roosts and foraging habitats of endangered bat species, monitoring of colonies, preparation and implementation of standardised monitoring programmes for bat populations, studies about roost utilisation and habitat preferences to provide basic knowledge for long-term conservation strategies, implementation of conservation measures, assisting during renovations of roosts, providing advice in case of bat-induced problems, and handling of injured individuals, information and education of the public to improve the public awareness and acceptance of bats

Graduation theses on Habitat use and roost selection of the noctule bat (*Nyctalus noctula*) in urban environment (Hočevar 2010) was made, along with and several student and pupil research assignments.

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 an EU member State, Slovenia is obliged to implement common EU legislation by its national legal order. A number of Directives on chemicals have been transposed and implemented. The *Law on chemicals* (Official Gazette of the Republic of Slovenia No. 36/1999) and several by-laws in particular the *Rules on trade in of biocides* (Official Gazette of the Republic of Slovenia No. 38/2000) have been adopted. The law on chemicals regulates the production, trade, use and control of chemicals in general. Special attention is given to chemicals that may pose threat to humans or the environment.

D. FUNCTIONING OF THE AGREEMENT

14. Cooperation with other Range States

INTERREG IIIA project *Conservation of Amphibians and Bats in the Alps-Adriatic Region* carried out by the CKFF and SDPVN, in cooperate with organizations from Austria (Arge NATURSCHUTZ, Koordinationsstelle für Fledermausschutz und -forschung in Österreich, Landesmuseum für Kärnten, Alpenzoo - Innsbruck, Universität Salzburg) and Italy (Naturmuseum Südtirol, Parco Naturale delle Prealpi Giulie, Riserva Naturale Orientata e Museo naturalistico di Onferno) .

The cooperation between bat researchers of former Yugoslav republics is well developed, e.g. in 2009 at Biology students association research camp mixed group of Slovenian and Montenegrins biologist and students researched bat fauna of south western Montenegro. Similar camp was held in Macedonia in 2010 and for some years Slovene and Croatian chiropterologist conducts joined winter monitoring of some caves.

There was also some multinational cooperation in different studies e. g. studies on phylogeography (*Rhinolophus ferrumequinum* (Rossiter et al. 2007), *R. euryale*, *Barbastella barbastellus* and *Miniopterus schreibersii* (Bilgin et al. 2010), and possible new cryptic (sub)species (*Myotis nattereri*).

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

Resolution No. 2.2 Consistent Monitoring Methodologies

We have participated in preparation of EUROBATS publication no. 5 *Guidelines for Surveillance and Monitoring of European Bats*, where also short summary of Slovene bat monitoring scheme is presented.

Resolution No. 2.3 Transboundary Programme: Species Proposals

Element 1: Bat Monitoring Programmes

Myotis dasycneme

There are no records of this species in Slovenia.

Pipistrellus nathusii

From 2008 till January 2010, 8 bats were equipped with bat bands. (www.ckff.si/?lang=en&pid=11&rid=0)

Resolution No. 2.4 Transboundary Programme: Habitat Proposals

Element 2: Bats Habitats

Underground Habitats

Slovenia has in 2010 submitted updated database of important underground bat roosts (see chapter 7).

Forests

SDPVN has in 2007 organised field workshop on forest bat species, during which experts from Germany and The Nederland presented their experience with some method e.g. telemetry. (Jazbec 2007)

Resolution No. 2.5 Geographical Scope of the Agreement

Slovenia agrees with this resolution.

Resolutions No. 2.6, 3.6, 4.13 Terms of Reference for the Advisory Committee

Slovenia agrees with this resolution.

Resolutions No. 2.7 and 3.6 Format of National Reports

Form is suitable.

Resolutions No. 2.8, 3.8, 5.10 Implementation of the conservation and management plan

Slovenia agrees with these resolutions, and in this national report gives general information's on legal requirements, population survey and monitoring, roosts, foraging habitats, promoting public awareness of bats and their conservation and providing advice, pesticides, international co-operation, and particular action undertaken during the reporting period.

Resolution No. 3.1 Integration of the EUROBATS Secretariat into the UNEP/CMS Agreements Unit

This action was welcomed.

Resolution No. 3.4 / 4.6 / 5.5 Guidelines for the Issue of Permits for the Capture and Study of Captured Wild Bats and Amendment to Resolution 4.6: Guidelines for the Issue of Permits for the Capture and Study of Captured Wild Bats

Decree on protected wild animal species (Official Gazette of the Republic of Slovenia No. 46/04 and 110/04) requires a permit for any research of protected species (including all bats). An exception is given for short term care of injured animals and where this is not suitable they should be given to a rescue centre. There is no special permitting regime for bats but they fall under general rules. The Decree applies to live and dead wild animals in all stages of development, parts or derivatives of dead animals or any goods made from dead animals or their parts which appear, from accompanying documents, the packaging or a mark or from any other circumstances, to be parts or derivatives of animals. The prohibition also applies to animal structures such as nests etc.

However Decree requires that all persons applying for licence describe the methods which will be used in specific research. The permit is issued by the Environmental Agency of the Republic of Slovenia on the basis of the written opinion made by the Institute for Nature Conservation of the Republic of Slovenia. An authorization is issued for a fixed (renewable) or undefined term and requires yearly reporting.

Bat workers have participated in process of formation of *Decree* and as practice has shown they are well acquainted with the provisions the resolution 4.4. There is peer-by-peer educational system mainly carried with the work of CKFF, SDPVN and Biology Student's Society.

Slovenian bat banding center was established in 2006 by Centre for Cartography of Fauna and Flora and annual reports of banding activities are published on the web site (www.ckff.si/?lang=en&pid=11&rid=0).

Resolution No. 3.5 International Year of the Bat

The 10th anniversary of the EUROBATS agreement and the International Year of the Bat were mentioned in several public awareness activities of SDPVN.

Resolution No. 3.7 Amendment of the Agreement

With the Act on the ratification of the agreement, Slovenia also adopted its amendments (*Official Gazette of the Republic of Slovenia No. 102/03*).

Resolution No. 3.9 Exception to Article XII of the Agreement

Slovenia agrees with this resolution.

Resolution No. 4.1 Financial and Administrative Matters (Budget 2004 – 2006)

Slovenia is satisfied with the proposed budget.

Resolution No. 4.2 Headquarters Agreement for and Juridical Personality of the Agreement Secretariat

Slovenia agrees with this resolution.

Resolution No. 4.3 Guidelines for the Protection and Management of Important Underground Habitats for Bats

Slovenia agrees with resolution. A list of important underground sites has been sent to the convenor of the IWG in 2003 and updates in 2010. Following the examples from EUROBATS publication no. 2, one additional hibernation and maternity roost was protected with appropriate grills in cooperation of Institute of the Republic of Slovenia for Nature Conservation and Slovenia Forest Service.

Resolution No. 4.4 Bat Conservation and Sustainable Forest Management

The *Rules on protection of forests* (Official Gazette of the Republic of Slovenia No.92/2000) regulate the use of forest in a manner to maintain the biological balance of forest ecosystem. The management of forest should protect rare and endangered species and their habitats. The exploitation of forest should be adopted to these conditions. As one of the measures, the Rules prescribe that old and dead trees should be left in the forest and be as far as possible evenly distributed.

Resolution No. 4.5 Guidelines for the Use of Remedial Timber Treatment

No particular action was taken.

Resolution No. 4.7 Wind Turbines and Bat Populations

No particular action was taken.

Resolution No. 4.8 Amendment of the Annex to the Agreement

Slovenia agrees with this resolution.

Resolution No. 4.9 Implementation of the Conservation and Management Plan (2003 – 2006)

Slovenia is in favour with the proposed plan.

Resolution 4.10 Contribution to the CBD/CMS Joint Work Programme

Slovenia agrees with this resolution.

Resolution No. 4.11 Recognizing the Important Role of Non-Governmental Organizations (NGOs) in Bat Conservation

Slovenia's authorities recognise the importance of NGOs in the field of nature conservation. Every year a public tender is released to provide funding for environmental NGO's.

Resolution No. 4.12 Priority Species for Autecological Studies

Slovenia actively participated in IWG on Autecological Studies for Priority Species.

Resolution No. 5.1 Financial and Administrative Matters (Budget 2007 – 2010)

Slovenia is satisfied with the proposed budget.

Resolution No. 5.2 Bats and Rabies in Europe.

In Slovenia till 2008 almost no testing for the presence of lyssaviruses in bats had been performed. The Veterinary Administration of the Republic of Slovenia commissioned a two-year active surveillance focussing on the a) *Eptesicus serotinus* and *Myotis daubentonii* species known to be reservoirs of EBLV, and b) species which roost in buildings and therefore have a potentially higher risk of coming into contact with humans. Sampling of bat saliva and blood was done during the summers of 2008 and 2009 (Presetnik & Podgorelec 2008b, Presetnik et al. 2009b). Bats were sampled from approximately 30 roosts and almost 40 mist netting sessions in foraging habitats or in front of supposed roosts across all Slovenia. 490 saliva samples and approximately 440 blood samples was collected (blood was not extracted from pregnant females and weaker specimens). We sampled 145 *Eptesicus serotinus*, 61 *Myotis daubentonii* and 63 *Rhinolophus hipposideros*, 57 *M. myotis*, 57 *Nyctalus noctula*, 50 *M. emarginatus* and 19 *Pipistrellus kuhlii* and 15 *M. mystacinus* s. lat. One to six samples were collected from 9 additional species (*R. ferrumequinum*, *M. bechsteinii*, *M. nattereri*, *M. cappacini*, *N. leisleri*, *P. pipistrellus*, *P. pygmaeus*, *P. nathusii* and *Miniopterus schreibersii*). During the project, almost 50 bat cadavers in different states, from fresh to mummified, were collected, and brain samples or swabs of their cranial cavities were taken. Saliva and brain samples were tested by RT-PCR test. Total viral RNA was extracted from samples using QIAamp[®] Viral RNA Mini Kit (Qiagen, Germany). Extracted RNA was stored at -70 °C until analysis. Reverse transcription (RT) with polymerase chain reaction (PCR) was performed in one tube (One-Step RT-PCR Kit, Qiagen, Germany) with primer set N1161P and N1579M to amplify 419 bp PCR product of the nucleo-phosphoprotein (N-P) gene segment. Sera samples were pooled (3-5 samples per pool) and antibodies against Lyssavirus were detected by FAVN test. Analyses for EBLV were all negative, and to date there is no confirmed EBLV presence in Slovenia. We can conclude that for the present, bats in Slovenia do not pose a significant public health risk. However, our recommendations are: a) to start a passive surveillance, b) to start raising the understanding of the real and potential risks involved in handling bats, focussing on medical doctors, veterinarians, biologists and bat volunteers, c) to start a new active surveillance in the case of an increase in EBLV reports in neighbouring countries and central Europe. (see Hostnik et al 2010, Presetnik et al. 2010).

Resolution No. 5.3 Amendment of the Annex to the Agreement

Slovenia agrees with this resolution.

Resolution No. 5.4 Monitoring Bats across Europe

Slovenia has established monitoring scheme (Presetnik et al. 2007, Presetnik & Podgorelec 2008a) and conducts regular surveys of important bat roosts.

Resolution No. 5.5 Amendment to Resolution 4.6: Guidelines for the Issue of Permits for the Capture and Study of Captured Wild Bats

See under resolution 3.4.

Resolution No. 5.6 Wind Turbines and Bat Populations

Slovenia agrees with this resolution. EUROBATS guidelines were distributed to those that are carrying out environmental impact assessments. More detailed description of mitigation measures recommended by EUROBATS would be welcomed.

Resolution No. 5.7 Guidelines for the Protection of Overground Roosts, with Particular Reference to Roosts in Buildings of Cultural Heritage Importance

Slovenia agrees with this resolution. The national database of names of important bat roosts in buildings was fully harmonized with the register of cultural heritage. In past years the number of meetings between officials responsible for conservation of nature and protection of cultural heritage and bat experts has increased and resulted in successful protections of several maternity roosts (Presetnik et al. 2009c, 2010b).

Resolution No. 5.8 Establishment of a Standing Committee of the Agreement

Slovenia agrees with this resolution.

Resolution No. 5.9 Terms of Reference for the Advisory Committee

Slovenia agrees with this resolution.

Resolution No. 5.10 Resolution 5.10: Implementation of the Conservation and Management Plan

See under resolution 2.8.

Resolution No. 5.11 Geographical Scope of the Agreement

Slovenia agrees with this resolution.

Resolution No. 5.12 2008 - Global Year of the Bat

Slovenia agrees with this resolution.

RELEVANT REFERENCES (2006-2010)

- Bilgin, R., Maracı, Ö., Puechmaille, S. J., Presetnik, P., Hamidovic, D., Fressel, N., Karapandža, B., Paunović, M., Ibañez, C., Allegrini, B., Gürün, K., Juste, J., 2010. The Distribution of Genetic Diversity of the Bent-winged Bat, *Miniopterus schreibersii*, in Europe and Anatolia. International Bat Research Conference, Praha 23-27. August 2010
- Hočevar, M., 2009. Raba prostora in izbor zatočišč pri navadnem mračniku (*Nyctalus noctula*) v urbanem okolju. Diplomsko delo. Oddelek za biologijo, Biotehniška fakulteta, Univerza v Ljubljani, Ljubljana. XIV, 92 str. (engl. abstract)
http://www.digitalna-knjiznica.bf.uni-lj.si/dn_hocevar_matej.pdf
- Hostnik P., D. Rihtarič, P. Presetnik, M. Podgorelec, M. Stantič Pavlinič & I. Toplak, 2010. Ugotavljanje lisavirusov pri netopirjih v Sloveniji. Zdrav. vest. 79: 265-271. (engl. abstract)
http://szd.si/user_files/vsebina/Zdravniki_Vestnik/2010/marec/265-71.pdf
- Jazbec, K., 2007. Na Slivnici o gozdih netopirjih. Glej, netopir! 4(1): 22-23.
- Krainer, K., C. Drescher & P. Presetnik (eds.), 2007. Fledermausschutz im Alpen- und Adria-Raum 2003-2006. Tutela dei Pipistrelli nell'area Alpina e Adriatica. Varstvo dvoživk in netopirjev v regiji Alpe-Jadran. INTERREG IIIA Austria-Italia-Slovenia. ArgeNATURSCHUTZ, Klagenfurt: 80 str.
- Marnell, F. & P. Presetnik, 2010. Protection of overground roosts for bats (particularly roosts in buildings of cultural heritage importance). EUROBATS Publication Series No. 4 (English version). UNEP / EUROBATS Secretariat, Bonn, Germany, 57 str.
http://www.eurobats.org/publications/publication%20series/pubseries_no4_english.pdf
- Presetnik, P., 2007. Register pomembnih zatočišč netopirjev v severni Sloveniji: razširjenost, ekologija, varstvo (Življenje okoli nas). Center za kartografijo favne in flore, Miklavž na Dravskem polju. 27 str.
http://www.ckff.si/projekti/interreg/dokumenti/zatocisca_net.pdf
- Presetnik, P., 2009. Contribution to the knowledge of current migration of *Miniopterus schreibersii* (Kuhl, 1817) North-West of Panonian Basin. 1st International Symposium on Bat Migration, Berlin, 16-18 January. Leibniz Institute for Zoo and Wildlife Research, pp. 66.
http://www.ckff.si/dokumenti/migration_NWPanonia_PPresetnik.pdf
- Presetnik, P. & M. Govedič, 2006. Možnosti pri monitoringu pestrosti netopirjev in njihovih populacijskih trendov v Sloveniji. V: D. Hladnik (ur.), Monitoring gospodarjenja z gozdom in gozdnato krajino, 261-

- 275 str., *Studia forestalia Slovenica: strokovna in znanstvena dela / Oddelek za gozdarstvo in obnovljive gozdne vire*, Biotehniška fakulteta; št. 127, Ljubljana.
- Presetnik, P. & F. Marnel, 2008. When bats and buildings collide - the protection of overground roosts in buildings of cultural heritage importance. Abstracts of the XIth European Bat Research Symposium, 18th-22nd August 2008, Cluj-Napoca, str. 118.
http://www.ckff.si/dokumenti/nadzemna_3_poEBRS_splet.pdf
- Presetnik, P. & M. Podgorelec, 2008a. The start of a bat monitoring scheme in Slovenia. Abstracts of the XIth European Bat Research Symposium, 18th-22nd August 2008, Cluj-Napoca, str. 119.
http://www.ckff.si/dokumenti/monitoring_6_splet.pdf
- Presetnik, P. & M. Podgorelec, 2008b. Ugotavljanje prisotnosti lyssa virusov pri netopirjih v letu 2008. Naročnik: Republika Slovenija, Ministrstvo za kmetijstvo, gozdarstvo in prehrano, Veterinarska uprava Republike Slovenije. Center za kartografijo favne in flore, Miklavž na Dravskem polju. 43 str.
- Presetnik, P., M. Podgorelec, V. Grobelnik & A. Šalamun, 2007. Monitoring populacij izbranih ciljnih vrst netopirjev (Zaključno poročilo). Naročnik: Ministrstvo za okolje in prostor, Ljubljana. Center za kartografijo favne in flore, Miklavž na Dravskem polju. 251 str.; digitalne priloge.
- Presetnik, P., A. Hudoklin & M. Podgorelec, 2008. Unfavorable conservation status of *Rhinolophus ferrumequinum* in Slovenia. Abstracts of the XIth European Bat Research Symposium, 18th-22nd August 2008, Cluj-Napoca, str. 117.
http://www.ckff.si/dokumenti/podkovnjaki_5_splet.pdf
- Presetnik P., K. Koselj, M. Zgajmajster, N. Zupančič, K. Jazbec, U. Žibrat, A. Petrinjak & A. Hudoklin, 2009a. Atlas netopirjev (Chiroptera) Slovenije, Atlas of bats (Chiroptera) of Slovenia. Atlas faunae et florae Sloveniae 2. Center za kartografijo favne in flore, Miklavž na Dravskem polju, 152 str.
http://www.ckff.si/publikacije/atlasnetopirjev/atlas_chiroptera_slovenia2.pdf
- Presetnik, P., M. Podgorelec & M. Cipot, 2009b. Ugotavljanje prisotnosti lyssa virusov pri netopirjih v letu 2009. Naročnik: Republika Slovenija, Ministrstvo za kmetijstvo, gozdarstvo in prehrano, Veterinarska uprava Republike Slovenije. Center za kartografijo favne in flore, Miklavž na Dravskem polju. 38 str.
- Presetnik, P., M. Podgorelec, V. Grobelnik & A. Šalamun, 2009c. Monitoring populacij izbranih ciljnih vrst netopirjev 2008-2009 (Zaključno poročilo). Naročnik: Ministrstvo za okolje in prostor, Ljubljana. Center za kartografijo favne in flore, Miklavž na Dravskem polju. 121 str.; digitalne priloge.
- Presetnik, P. M. Podgorelec, P. Hostnik, D. Rihtarič, I. Toplak & J. M. Wernig, 2010a. Sunny news from the sunny side of the Alps: Active surveillance for lyssaviruses in bats did not reveal the presence of EBLV in Slovenia. 2nd international berlin bat meeting: bat biology and infectious diseases, Berlin, 19-21 February. Leibniz Institute for Zoo and Wildlife Research.
http://www.ckff.si/dokumenti/EBLV_Slovenia08-09.pdf
- Presetnik, P., A. Hudoklin & N. Zupančič, 2010b. Varstveni ukrepi za ohranjanje ketišča netopirjev med obnovo cerkve svetega Duha v Črnomlju - Stavbe kulturne dediščine. *Varstvo narave* 23: 5-23.
http://www.zrsvn.si/dokumenti/63/2/2010/Presetnik_Hudoklin_Zupancic_1808.pdf
- Rossiter S. J., P. Benda, C. Dietz, S. Zhang & G. Jones, 2007. Rangewide phylogeography in the greater horseshoe bat inferred from microsatellites: implications for population history, taxonomy and conservation. *Molecular Ecology* 16(22):4699-4714.
- Zgajmajster, M., 2008. Netopirji. V: Tome, D. (ured.) *Naravovarstveno ovrednotenje izbranih vojaških območij v Sloveniji: primerjalna študija z referenčnimi območji*. CRP Znanje za varnost in mir 2006-2010. str 280-297. Nacionalni inštitut za biologijo, Ljubljana.

Report compiled by Primož Presetnik, Slovenian representative of the Advisory Committee