



**REPUBLIC OF MACEDONIA
MINISTRY OF ENVIRONMENT AND PHYSICAL PLANNING**

AGREEMENT ON THE CONSERVATION OF POPULATIONS OF EUROPEAN BATS

13th Meeting of the Advisory Committee to EUROBATS (AC 13)

Cluj, Romania: 23-24 August 2008



**MACEDONIAN NATIONAL REPORT
OF THE IMPLEMENTATION OF THE AGREEMENT ON BATS**

Skopje: June, 2008

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MACEDONIAN NATIONAL REPORT

- UPDATE TO THE YEAR 2007-2008

For remind, actions of the Ministry of Environment and Physical Planning and Macedonian Committee of the conservation of migratory species (MBC) for the activities of the bats conservation is described in the our National Report of the 5 Meeting of the Parties: Ljubljana, Slovenia, 2005 (see: [http://www.eurobats.org/Party Reports/ Macedonia.htm](http://www.eurobats.org/Party_Reports/Macedonia.htm)) and update to our last National Report of 12 Meeting of the Advisory Committee (AC12).

Macedonian Committee of the CMS (MBC) has consider following directions:

- Protect the nature ecosystems and habitats,
- Protection of the buildings in urban and rural complexes,
- Promoting important ruts of the bats population on biodiversity conservation,
- Organizing The 10 Bats Night (26 August 2007) in Skopje (Old building of the Museum of City Skopje and City Park- Skopje) and in many different places in Macedonia,
- Created Work Programm of activities for organizing The 11 Bats Night (August 2008) in Macedonia.

A. General information

- Party: **Republic of Macedonia**
- Date of report: **June 2008**
- Period covered by Report: **July 2007- June 2008**
- Competent Authority: **Ministry of Environment and Physical Planning**

B. Status of Bats within the Territory of the Party

1. Summary Details of the Species

Situation similar to the last report (2007). See Annex I.

2. Status and Trends

Situation similar to the last report (2007). See Annex II.

3. Habitats and Roost Sites

The majority of data has been collected from the traditionally examined areas, which are also considered as the key sites of bat diversity. Currently bats are known in 54 localities in the Republic of Macedonia. The territory of Macedonia has been unequally studied (see Annex III).

Most of the data originate from the Vardar River valley, while the greatest gaps are in the Northeast. Collectors also sampled mainly at lower altitudes, while the mountains were neglected. For the majority of them, nursery or pregnant females and juvenile specimens were found in caves or other underground spaces.

This is in accordance with the origin of most of the Museum Specimens, which were collected by hand in such underground galleries. Bats not roosting in caves were mainly overlooked, or were collected only occasionally.

Consequently, further investigations on the bats in Republic of Macedonia are necessary in ascertaining improved information as a primary basis of their future conservation.

4. Threats

Human activities in Macedonia over the last 50 years have been apparently large in the lowland areas, as constant draining of wetlands, steady reduction of forests, urbanization of large areas, uniformity in the arrangement and landscaping of farmland, continuing and increasing use of chemicals to eliminate unwanted insects etc.

The higher altitude habitats are less exposed to human activities.

5. Data Collection

The source of data is the Institute of Biology- Faculty of Natural Science, P.Box 162, 1000-Skopje and Macedonian Museum of Natural History, Boulevard Ilinden 86 Skopje

C. Measures Taken to Implement Article III of the Agreement

6. Legal measures taken to protect bats (to prevent the deliberate capture, keeping or killing bats), including details of enforcement actions.

Notwithstanding the fact that law does not specially protect bats, traditionally they never have been a subject of capture, keeping or killing.

Hitherto, 132 localities are protected in Macedonia, with different protection rank, with total surface of 260.855 ha.

Of them, especially important are 4 Strict Natural Reserves: Ezerani, on the Prespa Lake, Tikvesh, Lokvi, Golemo Konjari and Ploce-Litotelmi (12.855 ha), three National Parks: Pelister, Mavrovo and Galicica (110.000 ha), 10 Scientific Reserves, 27 Natural Monuments (rivers, lakes, forests and caves), etc.

Legislative Basis for Bats Conservation

This matter is included in the New Framework Law for Nature protection. In our Biennial Programme (2007/2008) is included preparation of sub-legislation of Law of Nature Protection (proclaimed 2007) and Law for Animal Protection. Situation of the other legislative is similar to the last update report (2007). In next triennium (2009-2011) sub-legislation will be harmonized with the EU Directives.

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

The Macedonian Committee of the Bonn Convention (MBC) was promoted actions to make the Macedonian list of SCI (important to the conservation of bats). This action is coordinated and instructed of experts from sciences institutions of nature conservation: Macedonian Academy of Sciences and Arts Skopje, Faculty of Natural Sciences Skopje, Macedonian Museum of Natural History Skopje, Speleological Society "Peoni", Skopje, Agency "Naturopa" and Department of Biological Diversity, Sector of Nature on the Ministry of Environment and Physical Planning, Skopje.

8. Consideration given to habitats which are important for bats

The Macedonian Committee of CMS, has promote project with several very important actions for research about feeding habitat use by bats in Macedonia. This action coordinate experts from Zoological Department on Faculty of Sciences, Macedonian Museum of Natural History, Department of Biological Diversity, Skopje, Speleological Society "Peoni" Skopje, Sector of Nature and NCA "Naturopa" on the Ministry of Environment and Physical Planning, Skopje.

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

In reporting period by the Macedonian Environmental Info-Center and Sector of Public Communication on the Ministry of Environment and Physical Planning has been promoted this awareness of the importance of conservation of bats population and their habitats. Many of data, information and pictures are include on our web-site and on printing material (prospects, brochures, posters, catalogs, calendars etc.).

Department of Biological Diversity, Sector of Nature and NCA "Naturopa", with co-operation and assistance of the Macedonian Committee of CMS, has been realized process of implementation measures and actions for protection bat population and their habitats in Macedonian forests. This activity is framework of the Pan-European Project "Bats in European Forests". Also, we have very important activity to make inventory (data and information of our second project "Under ground Habitats in Macedonia" on the framework of UNEP Trans boundary Programme "Underground Habitats: Data Compilation".

The Campaign of the Macedonian Bat Night 2007 traditionally has been started on 21 March (1st European Ecological Day) and continue of 22 April (International Day of Planet), 22 May (International Day of Biological Diversity) and 5 June (World Day of Environment). In 26 August has been organize many manifestation with education of the schools, ecological sections and NGO-s.

Also, Macedonian Committee of CMS and Macedonian Committee of CBD has organize several debates to protect bat populations and their habitats in Macedonia.

This year many of activities from our Programme where implemented in co-operation of our partners in Macedonia, Contracting Parties in Balkan Peninsula, CEE, EU, other European countries and international organizations and supported by UNEP/ EUROBATS Secretariat.

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

Institute of Biology, Faculty of natural Science- Skopje

Gazi Baba bb, P.Box.162, 1000- Skopje Macedonia

Macedonian Museum of Natural History

Boulevard "Ilinden" 86, 1000 Skopje Macedonia

11. Additional action undertaken to safeguard populations of bats

- Created concept of priority for next triennium;
- Preparing application of important projects for biodiversity conservation.

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

Project for Macedonian Emerald- Network in co-operation with the Secretariat of the Bern Convention of the Council of Europe and European Environmental Agency has include several important areas for protection of bat population in Macedonia (ASCI).

Experts have evaluated nature areas and species. On the List of fauna species has been include species of the Mammals, especially CHYROPTHERA: RHINOLOPHIDAE (Rhinolophus blasii, Rhinolophus euryale, Rhinolophus ferrumequinum, Rhinolophus hipposideros, Rhinolophus mehelui) and VESPERTILIONIDAE (Myotis blythii, Barbastella barbastellus, Miniopterus schreibersi, Myotis capaccinii, Myotis emarginatus, Myotis myotis).

13. Considerations being given to the potential effects of pesticides on bats, and efforts to replace timber treatment chemicals which are highly toxic to bats

Department of Biological Diversity and Department of Environment Impact Assessment in the Administration of Environment, in co-operation whit State Inspectorate of Environment by the Ministry of Environment and Physical Planning, has been organize several very important actions for elimination potential effects of pesticides on biodiversity, (including populations of bats).

Also, Sector of Nature in Administration of Environment, in co-operation with the Sector of Forest and Hunting by the Ministry of Agriculture, Forestry and Water-management has analyzed the efforts to replace timber treatment chemicals which are highly toxic to flora and fauna, including bats and collect review.

Functioning of the Agreement

Co-operating with other Range States

Department of the biodiversity and State Agency for Natural Conservation in The Netherlands, Sciences institution in Albania, Bulgaria, Slovenia, Croatia, Romania, Czech Republic, Slovak Republic, Germany, Switzerland, France, Lithuania, Luxembourg, Italy, Serbia, Montenegro, Turkey, Ukraine and UK.

Annex I

Status of Bats within the territory of the Republic of Macedonia

1. Summary details of the Species

Twenty-four species of bats are currently known to occur within the territory of Macedonia. On the basis of the available data from the adjacent regions (Bulgaria, Greece and Serbia) and habitat diversity in Macedonia, the presence of four additional species could be expected. The majority of specimens and information are from spring; summer and early autumn, while winter visits to caves were exceptional. Consequently, only five species (*Rhinolophus ferrumequinum*, *Rhinolophus hipposideros*, *Myotis myotis*, *Nyctalus noctula* and *Miniopterus schreibersii*) were found in hibernation. For nine species we have evidence of their reproduction in the region: *Rhinolophus ferrumequinum*, *Rhinolophus euryale*, *Myotis myotis*, *Myotis blythi*, *Myotis emarginatus*, *Myotis capaccinii*, *Eptesicus serotinus*, *Pipistrellus pipistrellus* and *Miniopterus schreibersii*.

2. List of threatened bat species in Macedonia

<i>Rhinolophus blasii</i>	<i>Rhinolophus euryale</i>	<i>Rhinolophus mehelyi</i>
<i>Rhinolophus hipposideros</i>	<i>Rhinolophus ferrumequinum</i>	<i>Barbastrella barbastrellus</i>
<i>Miniopterus schreibersii</i>	<i>Myotis capaccinii</i>	<i>Myotis emarginatus</i> .

Table 1. Threatened status of Bat species (Mammalia: Microchiroptera) in Macedonia

	NATIONAL AND SCIENTIFIC NAME OF SPECIES	TREAT STATUS (CATEGORY) (2000)	TREAT STATUS (CATEGORY) (2004)
1	2	3	4
Rhinolophidae			
1	<i>Rhinolophus blasii</i>	VU	VU
2	<i>Rhinolophus euryale</i>	VU A2c	VU
3	<i>Rhinoloph. ferrumequinum</i>	LR:nt	VU
4	<i>Rhinolophus hipposideros</i>	VU A2c	VU
5	<i>Rhinolophus mehelyi</i>	VU A2c	VU
6	<i>Barbastella barbastellus</i>	VU A2c	VU
7	<i>Miniopterus schreibersii</i>	LR:nt	VU
8	<i>Myotis capaccinii</i>	VU A2c	VU
9	<i>Myotis emarginatus</i>	VU A2c	VU

Source: IUCN/SSC CSG (2001), Hudson. M.A. et al./ Global Status and Conservation Action Plan MOEPP (2003), Petkovski S. & V. Sidorovska/ Country Study of Biological Diversity in Macedonia IUCN World Status: VU- vulnerabl; LR:nt- Lower Risk:near threatened

Annex II

Table 2. The distributional and estimated found status of the bat species known in Macedonia

	SPECIES	DISTRIBUTION STATUS	ESTIMATED FAUNAL STATUS	HIBERNATION SITES	SUMMER ROOST
1.	<i>Rhinolophus hipposideros</i>	widespread	common	mines	buildings, caves
2.	<i>Rhinolophus ferrumequinum</i>	widespread	common	mines	caves
3.	<i>Rhinolophus euryale</i>	widespread	common		caves
4.	<i>Rhinolophus blasii</i>	restricted	rare		
5.	<i>Rhinolophus mehelyi</i>	restricted	rare		caves, mines
6.	<i>Myotis mystacinus</i>	widespread	rare		
7.	<i>Myotis myotis</i>	widespread	numerous	caves	caves
8.	<i>Myotis daubentonii</i>	restricted	rare		
9.	<i>Myotis blythi</i>	widespread	common		caves, mines
10.	<i>Myotis emarginatus</i>	restricted	common		caves
11.	<i>Myotis capaccinii</i>	widespread	common		caves, mines
12.	<i>Myotis nattereri</i>	restricted	rare		
13.	<i>Nyctalus noctula</i>	widespread	rare		hollow trees
14.	<i>Nyctalus leisleri</i>	restricted	rare		
15.	<i>Eptesicus serotinus</i>	restricted	rare		caves
16.	<i>Vespertilio murinus</i>	restricted	rare		
17.	<i>Pipistrellus pipistrellus</i>	widespread	common		buildings, caves
18.	<i>Pipistrellus nathusii</i>	restricted	rare		
19.	<i>Pipistrellus kuhlii</i>	restricted	rare		
20.	<i>Hypsugo savii</i>	restricted	rare		
21.	<i>Plecotus austriacus</i>	restricted	rare		
22.	<i>Barbastella barbastellus</i>	restricted	rare		
23.	<i>Miniopterus schreibersi</i>	widespread	common	caves	caves
24.	<i>Tadarida teniotis</i>	restricted	rare		

Annex III

Localities in Macedonia where bats were collected

01	Bader, on the Pcinja river (240 m)	23	Krajnici, 17 Km S of Veles (560 m)
02	Ajvatovsko Ezero, near Ajvatovci (230 m)	24	9 Km S of Izvor, near Veles (560 m)
03	Pobožje, on Skopska Crna Gora Mts. (600 m)	25	Konopiste, 35km of Kavadarci (680 m)
04	Banjane, 8 km NW of Skopje (480 m)	26	Asan Cesma, Kozuf Mts. (1350 m)
05	Rashce, approx.10 Km W od Skopje (325 m)	27	Nov Dojran, on Lake Dojran (150 m)
06	Skopje (250 m)	28	Rabrovo, near Valandovo (160 m)
07	Nerezi, Skopje (307 m)	29	Anska Reka, 2,5 km W of Valandovo (165 m)
08	The Manst. "Sv.Andreja", Matka (340 m)	30	Rezvik, near Bansko, Strumica (280 m)
09	Volkovija, on the Bistra Mts. (1035 m)	31	5 km SW of Strumica (550 m)
10	Ubavica (a cave), near Gosivar (840 m)	32	5 km S of Suvi Laki (1300 m)
11E	Slatina, near Makedonski Brod (600 m)	33	Demir Kapija, near Negotino (95 m)
11b	2 km E od Slatina, near M. Brod (600 m)	34	Trifunovo Brdo, near Pepeliste (400 m)
12	Belica, near Makedonski Brod (580 m)	35	Stip (330 m)
13	3 Km E of Velmej (850 m)	36	Kocani (345 m)
14	Javorec (a cave), near Velmej (1010 m)	37	Bela Voda (a cave) Demir Kapija (95 m)
15E	Meckina Dupka (a cave), near Ohrid (900 m)	38	Sar Planina Mts. (1450 m)
15b	Ohrid (760 m)	39	Drenovska Klisura (george), Drenovo(110 m)
16	Trpejca, near Lake Ohrid (700 m)	40	Dracevo, near Skopje (300 m)
17	Leskoec, Otesevo, Lake Prespa (1000 m)	41	A part on Vodno, near Skopje (370 m)
18	Kubrinovo, Asamati, Lake Prespa (1000 m)	42	Gazi Baba, PMF, Skopje (300 m)
19	Golem Grad (island), Lake Prespa (900 m)	43	OHIS, Skopje (250 m)
20	Pesterica (a cave), Oreovec, Prilep (880 m)	44	Tunel, Drenje, near Kriva Palanka (670 m)
21	Petrani, near Veles (380 m)	45	Ljuboten, Sar Planina Mts. (1600 m)
22E	Makarovec, near Veles (197 m)	46	Gipsana Pesterica (a cave), Mavrovo (650 m)
22b	Markova Kula, near Crkvino (200 m)		

Table 3. Species Diversity of the locations: No 33 “Demir Kapija” and 37 Bela Voda (cave)

	Species Diversity	Distribution status	Estimated faunal status	Hibernation site	Summer roost
1.	<i>Eptesicus seroticus</i>	restricted	rare		cave
2.	<i>Myotis myotis</i>	widespread	numerous	cave	cave
3.	<i>Myotis blithii</i>	widespread	common		cave, mine
4.	<i>Myotis capaccinii</i>	widespread	common		cave
5.	<i>Myotis emarginatus</i>	restricted	common		cave
6.	<i>Myotis mystacinus</i>	widespread	rare		
7.	<i>Pipistrellus pipistrellus</i>	widespread	common		cave
8.	<i>Pipistrellus nathusii</i>	restricted	rare		
9.	<i>Rhinolophus ferrumequinum</i>	widespread	common	mines	cave
10	<i>Rhinolophus hipposideros</i>	widespread	common	mines	cave
11	<i>Rhinolophus euryale</i>	widespread	common		cave
12	<i>Rhinolophus blasii</i>	restricted	rare		-
13	<i>Rhinolophus mehelyi</i>	restricted	rare		cave
14	<i>Barbastella barbastellus</i>	restricted	rare		
15	<i>Plecotus austriacus</i>	restricted	rare		
16.	<i>Nyctalus noctula</i>	widespread	rare		hollow trees
17	<i>Miniopterus schreibersi</i>	widespread	common	cave	cave
18	<i>Tadarida teniotis</i>	restricted	rare		

Source: Evaluation of Biological Diversity in Nature Locality “Demir Kapija”, MBC/DBD-AE, 2008.

Table 4. Approvals or registration process

Is the supply and use of remedial timber treatment chemicals regulated by a national authority? Please name the authority.	yes Ministry for Agriculture, Forestry and Water Management, Skopje.
Does the approval or registration process include an assessment of ecotoxicity?	yes Assessment of ecotoxicity.
Are bats specifically included in the ecotoxicological assessment of products to be used to treat structural timbers in the roofs of buildings? If so, is there a formal methodology to be used?	Yes, generally The assessment included toxical impact to wildlife fauna species and peoples.
Are the directions or instructions for use (on a label or accompanying document) required to refer to ecotoxicity?	yes
Do the directions or instructions for use (on a label or accompanying document) of remedial timber treatment products refer to the possible hazard to bats? If so, is this a legal requirement or a voluntary agreement? Please include an example label	
Is advice given to the industry on ways in which any hazard to bats as a result of RTT may be minimised?	yes

Table 5. Types of treatment and size of industry

1. What proportion of treatments of roof voids for wood-boring insects or wood-rotting fungi include the application of RTT biocides?	High (>90%)
	Medium (50-90%)
	Low (<50%) x
2. Please estimate the total number of private dwellings for your country	Is not data for the total number of private dwellings.
3. Please estimate the number of <u>specialist</u> companies carrying out RTT. This does not include general builders or other non- specialist companies.	Is not official data for the number of specialist companies for RTT trade.
4. Please estimate the number of roof voids treated annually by specialist companies for wood-boring insects or wood-rotting fungi.	Is not data for the number of roof voids treated annually (by spec. companies...) It is very difficult.

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