



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

AGREEMENT ON THE CONSERVATION OF POPULATIONS OF EUROPEAN BATS

9th Meeting of the Advisory Committee to EUROBATS (AC9)

Vilnius, Lithuania: 17-19 May 2004



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

Skopje: March, 2004

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MACEDONIAN NATIONAL REPORT

- UPDATE TO THE YEAR 2003/2004-

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 3th and 4th Meeting of the Parties: Bristol, UK, July 2000; Sofia, BG, September 2003 (see: http://www.eurobats.org/Party_Reports/Macedonia.htm) and Draft-reports 7th and 8th Meeting of the Advisory Committee (Bucharest, Romania , May 2002; Roros, Norway, May 2003).

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

- Protect the nature ecosystems and habitats (caves, rivers, canyons, forests and other nature areas),
- Protection of the buildings in urban and rural complexes,
- Promoting important rutes of the bats population on biodiversity conservation,
- Activities to organization The 7th Bats Night (26 August 2004) in Skopje (Macedonian Museum of Natural History and Sity Park) and in many different places in Macedonia.

A. General information

- Party: **Republic of Macedonia**
- Date of report: **March 2004**
- Period covered by Report: **September 2003- March 2004**
- 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 (2003). See Annex I.

2. Status and Trends

Situation similar to the last report (2003). See Annex II (table 1).

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 46 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 Macedonian Museum of Natural History, Boulevard Ilinden 86, MK-1000 Skopje bb.

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 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 on the New Framework Law for Nature protection. In our Biennial Programme (2004/2005) is included preparation of the New Law for Animal Protection. Situation of the other legislative is similar to the last report (2003). In next triennium (2005-2008) many of laws will be harmonized with the EU Directives.

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

The National Committee of the Bonn Convention (NBC) was promoting actions to make the Macedonian list of SCI (important to the conservation of bats). This action is coordinated and instructed by experts from science institutions and nature conservation: Macedonian Academy of Sciences and Arts (MASA), Faculty of Natural Sciences (FNS), Macedonian Museum of Natural History (MMNH), Speleological Society "Peoni", Agency "Naturopa" and Department of Biological Diversity on the Ministry of Environment and Physical Planning.

8. Consideration given to habitats which are important for bats

Also MBC, in February 2004, has promoted actions for research about feeding habitat use by bats in Republic of Macedonia. This action coordinates experts from Zoological Department on Faculty of Sciences, Macedonian Museum of Natural History, Department of Biological Diversity (DBD), Speleological Society "Peoni" and NCA "Naturopa" on the Ministry of Environment and Physical Planning (MOEPP).

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

In period I-III.2004 the Macedonian Environmental Info-Center (MEIC) on the Ministry of Environment and Physical Planning has made with his activities to promote this awareness of the importance of conservation of bats population and their habitats. Many of data, information and pictures are included on our web-site and on printing material (prospects, brochures, posters, catalogs, calendars etc.).

MEIC continues his education of journalists from Macedonian Eco-Press Center.

In accordance to Resolution 4.4, paragraph 7, the UNEP/EUROBATS Secretariat has prepared information for forest managers and forest workers, advising on bat conservation in forest ecosystems. Result of this activity is the booklet "Bats in Forests" (publ. by GAL/FANC).

In March 2004, our departments and sectors (DBD, NCA "Naturopa" and MEPC on the MOEPP), with co-operation and assistance of the MBC, ZD/FS, MMNH and coordinate of the Secretariat of the UNEP/EUROBATS have collected information and start preparation of several materials for our project "Bat in Macedonian Forests". These activities are correspondent to the Pan-European Project "Bats in European Forests". Also, we have collected data and information of our second project "Underground Habitats in Macedonia" on the framework of UNEP Transboundary Programme "Underground Habitats: Data Compilation".

The Campaign of the Macedonian bat Night 2004 has start on 21 March (1st European Ecological Day) and continue of 22 April (International Day of Planete), 22 May (International Day of Biological Diversity), 5 June (World Day of Environment) and 25 August will be organize many manifestation with education ecological sections and NGO-s.

Also, Macedonian Committee of CMS (MBC) and Macedonian Committee of CBD (MCBD) has organize Ceremony with support of the Ministry of Environment and Physical Planning and participation of the Sciences institution and NGO-s. National focal point of the CMS, CBD, CW, BC and others international conventions and agreement was promoted EUROBATS decisions to organize International Year of the Conservation of Migratory Species-2004.

This year many of activities from our Program will be implement in co-operation of our partentrs in Macedonia, Contracting Parties in Balkan Peninsula, CEE, EU, other european countries and international orgaizations, in co-ordination of the UNEP/CMS Secretariat and 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**

Macedonian Museum of Natural History (MMNH)
Boulevard "Ilinden" 86, MK-1000 Skopje Macedonia

11. Additional action undertaken to safeguard populations of bats

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

Project for Macedonian Emerald- Network (MEN) in co-operation with the Secretariat of the Bern Convention (BC) of the Council of Europe has include 3 ASCI (NP Galicica, SNR Ezerani on the Lake Prespa and Lake Doiran), and two potential areas.

Experts has evaluated nature areas and species (flora, fungya and fauna). On the List of fauna species has been include species of the Mammals, especialy Micro-mammalia.

Chiroptera:

EN/ASCI 00001 "National Park- Galicica"

RHINOLOPHIDAE: Rh.blasii, Rh. euryale, Rh. ferrumequinum, Rh. hipposideros

VESPERTILIONIDAE: Myotis blythii.

EN/ASCI 00002 "Strict Nature Reserve- Ezerani"

RHINOLOPHIDAE: Rh.blasii, Rh. euryale, Rh. ferrumequinum.

VESPERTILIONIDAE: Myotis blythii.

EN/ASCI 00003 “Monument of Nature- Dojransko Ezero” /Lake Dojran

RHINOLOPHIDAE: *Rh. blasii*, *Rh. euryale*, *Rh. ferrumequinum*, *Rh. hipposideros*, *Rh. mehelyi*

VESPERTILIONIDAE: *Barbastella barbastellus*, *Miniopterus schreibersi*, *Myotis blythii*,

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

In 2002 and 2003, DBD and Department of Environment Impact Assessment (D-EIA) of the MOEPP, in cooperation with State Inspectorate of Environment (SIE) has organized several actions for eliminating potential effects of pesticides on biodiversity, (including populations of bats).

The Agency of Natural Conservation (ANC), D-EIA and SIE of the MOEPP, in cooperation with the Ministry of Agriculture, Forestry and Water-management (MAFWM) have 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, Rumania, Czech Republic, Slovakia, Germany, Switzerland, France, Luxembourg, Italy and Serbia and Montenegro.

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 schreibersi*) 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 schreibersi*.

2. List of threatened bat species in Macedonia

Rhinolophus blasii

Rhinolophus euryale

Rhinolophus mehelyi

Rhinolophus hipposideros *Rhinolophus ferrumequinum* *Barbastrella barbastrelus*
Miniopterus schreibersii *Myotis capaccinii* *Myotis emarginatus*.

Table 1. Treated 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 cappacinii</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 threated

Annex II

Table 2. The dritributional 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 Peinja 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, na 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)		
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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” (future Strict nature Reserve)
MOEPP, Agency of Environmen, 2003.

Table 4. Active ingredients

Active ingredient (E-ISO name)	Approved (or available) for use in RTT	Commonly used	Rarely used	Comments
Pentachlorophenol PCP	-			
Dieldrin: HEOD	-			
Lindane: y-HCH, BHC	-			
DDT	-			
Tributyl tin comp.: TBT, TBTO	-			
Synthetic pyrethroids (Permethrin, Cypermethrin etc)	-			
Boron compounds	-			

Zinc compounds	-			
3-Iodo-2-propynyl-n-butyl carbamate Polyphase/IPBC	-			
Propiconazole	-			
Azaconazole	-			
Tebuconazole	-			

Table 5. 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?	generally (not specialy) 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 6. 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	Is not official data for the number of specialist companies for RTT trade.

other non- specialist companies.	
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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