EUROPEAN COMMISSION
HEALTH & CONSUMERS DIRECTORATE-GENERAL

Unit 04 - Veterinary Control Programmes

SANCO/3936/2008

*Programmes for the eradication, control and monitoring of certain animal diseases and zoonoses*

# Multi-annual programme for the eradication of Rabies

## Approved* for 2009 by Commission Decision 2008/897/EC

# Slovenia

* in accordance with Commission Decision 90/424/EEC

REPUBLIC OF SLOVENIA
**MINISTRY OF AGRICULTURE, FORESTRY AND FOOD**
VETERINARY ADMINISTRATION OF REPUBLIC OF SLOVENIA

Reference No.: 5440 – 1/2007/12
Date: 21st May 2008

For: European Commission
DG SANCO
**Veterinary Control programmes**
**Dr. James Moynagh, Head of Unit**
200, Rue de la Loi
Bruxelles

Subject: Inclusion of rabies surveillance programme in bats in Slovene multi-annual rabies eradication programme 2008 - 2012

Dear Sir,

Last year we submitted multi-annual rabies eradication programme for approval and cofinancing in the frame of article 24 of Council Decision 90/424/EEC. The programme was approved with Commision Decision 2007/782/EC for the period of 2008 – 2012.

Additionaly, this year we prepared and finalised rabies surveillance programme in bats and we'll start with the implementation of this programme in May.

Since the programme is a part of the national eradication strategy of rabies we would like to include it also in the frame of already approved rabies eradication programme. Additional funding is not requested in this respect.

If you need any further information, please do not hesitate to contact us.

Sincerely yours,

REPUBLIKA SLOVENIJA MINISTRSTVO ZA KMETIJSTVO, GOZDARSTVO IN PREHRANO Veterinarska uprava Republike Slovenije 001 LJUBLJANA

Dr. Vida Čadonič Špelič,
Chief Veterinary Officer

Annex:
- Rabies surveillance in bat population in the Republic of Slovenia

To be filed under:
- Reference No.

REPUBLIC OF SLOVENIA
MINISTRY OF AGRICULTURE,
FORESTRY AND FOOD
**VETERINARY ADMINISTRATION OF REPUBLIC OF SLOVENIA**

# Rabies surveillance in bat population in the Republic of Slovenia

## I. Introduction

Primary focus is on the sampling of those bat species in which Lyssaviruses or Lyssavirus antibodies are most frequently cited to have been detected. These include the serotine bat (*Eptesicus serotinus*) and the Daubenton's bat (*Myotis daubentonii*).

The two species differ substantially from each other in biology, and therefore, the sampling will need to be adapted to each species separately (description hereinafter). While samples of the serotine bat may be collected in its roosts (in buildings), samples of the Daubenton's bat may be collected by mist netting only in its feeding habitats or flight routes.

As a secondary scope of research we propose to sample some species, which most frequently roost in buildings and which could thus most easily come into contact with man. These species include in particular the lesser horseshoe bat (*Rhinolophus hipposideros*), the greater mouse-eared bat (*Myotis myotis*) and the noctule bat (*Nyctalus noctula*), and some species of the genus pipistrelle bats (*Pipistrellus*).

Generally speaking, a most appropriate time for sampling would be while females are in the early stages of pregnancy (indicatively, in April or early May) or where the pups are sufficiently grown so as to begin to feed by themselves (indicatively, in the second half of July), which greatly depends on the weather conditions in the year of sampling. Sampling sites would be most evenly distributed throughout Slovenia.

A plan of harmonised action should be prepared for the case that the publication of study results on the prevalence of Lyssaviruses would alarm the general public. An adequate brochure (leaflet) could be published in advance so as to improve public awareness of Lyssaviruses.

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## II. Programme

The serotine bat (***Eptesicus serotinus***)

Current state of known and adequate sampling sites:
23 known sites with maternity colonies/roosts of the serotine bat (Figure 1)
(as estimated, the bats may be accessed without too great a risk in one half of the cases, otherwise the bats are roosting too high or hidden in crevices which are inaccessible for man)

Number of sampling sites and number of bats:
10 sampling sites, 5 bats per site
(all bats sampled shall be ringed for the long-term monitoring of the state)

Number of operators in the field, and working days:
2 sampling operators, and 5 working days (approx. 2-3 sites/day)

Sampling date:
Indicatively, end of April–early May and/or second half of July
(times of arrivals to and departures from the roost sites in Slovenia are unknown, and the times of births are more or less unknown as well – it is supposed that pups are born in the first half of June, allowing for the differences between the particular regions)

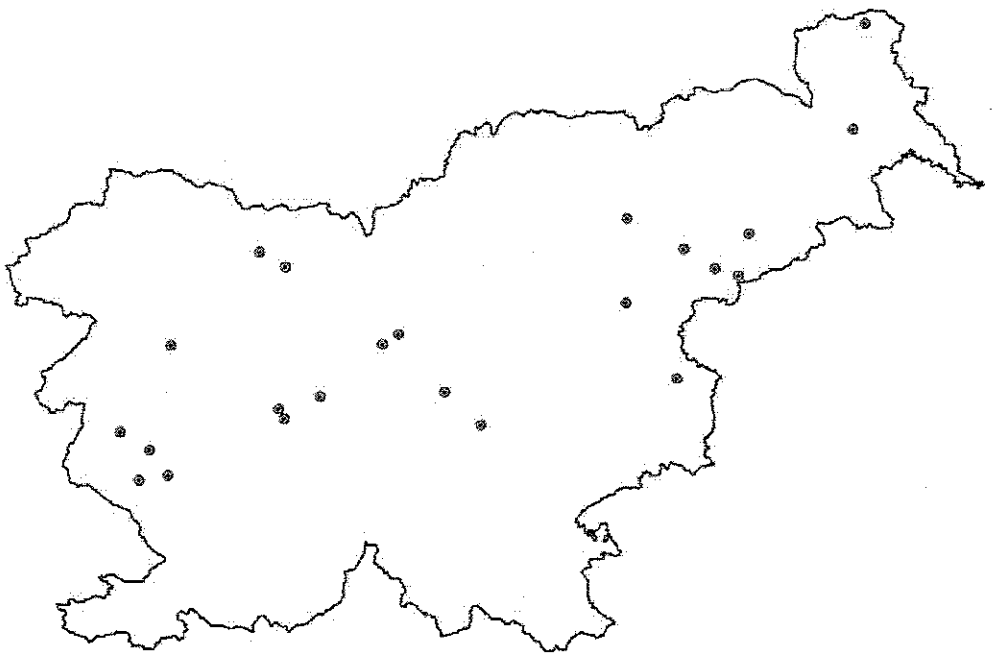

*Figure 1. Roost sites of the serotine bat in Slovenia (CKFF database, 16.6.2007)*

The Daubenton's bat (*Myotis daubentonii*)

Current state of known and adequate sampling sites:
38 netting sites where the Daubenton's bats were trapped (Figure 2)
(2-3 bats were trapped in mist netting on the average, 17 times 1 bat only, and twice 10 or more bats)

Number of sampling sites and number of bats:
10 sampling sites, all or up to 5 bats per site; samples may be taken also from other species trapped in mist netting
(all bats sampled shall be ringed for the long-term monitoring of the state)

Number of operators in the field, and working days:
3 sampling operators and 10 working days (1 site/day)

Sampling date:
Indicatively, in August and September
(time of arrivals to the mating site)

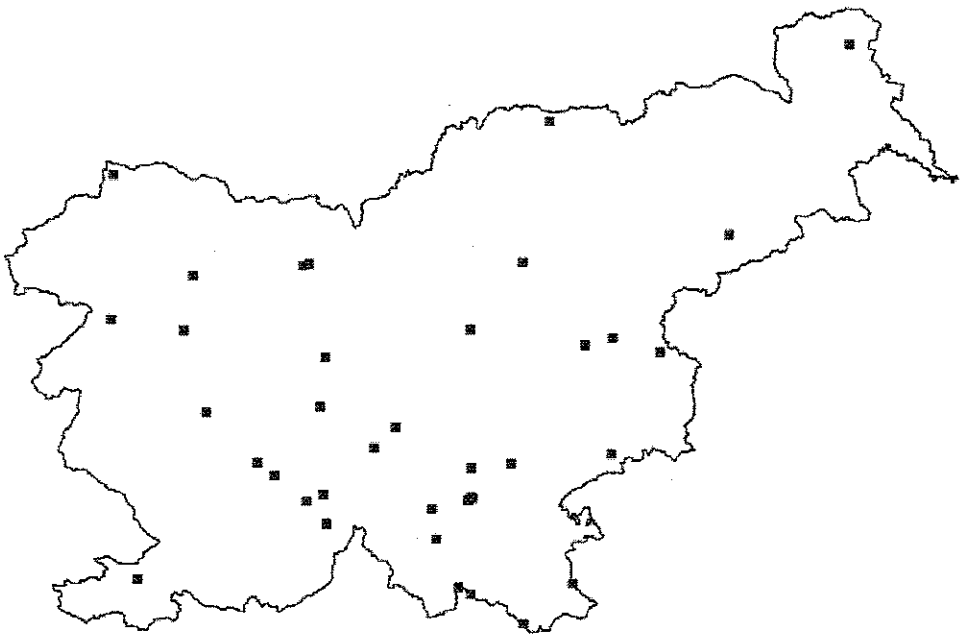

*Figure 2. Netting sites where the Daubenton's bats were trapped in Slovenia (CKFF database, 16.6.2007)*

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The lesser horseshoe bat (***Rhinolophus hipposideros***)

Current state of known and adequate sampling sites:
252 known sites of maternity colonies/roosts of the lesser horseshoe bat, mostly in the attics of uninhabited buildings (Figure 3)

Number of sampling sites and number of bats:
10 sampling sites (colonies of over 50 adults), 5 bats/site
(all bats sampled shall be ringed for the long-term monitoring of the state)

Number of operators in the field, and working days:
2 sampling operators, and 5 working days (approx. 2-3 sites/day)

Sampling date:
Indicatively, early May and/or second half of July
(times of arrivals to and departures from the roost sites in Slovenia are unknown, and the times of births are more or less unknown as well – it is supposed that pups are born in the second half of June, allowing for the differences between the particular regions)

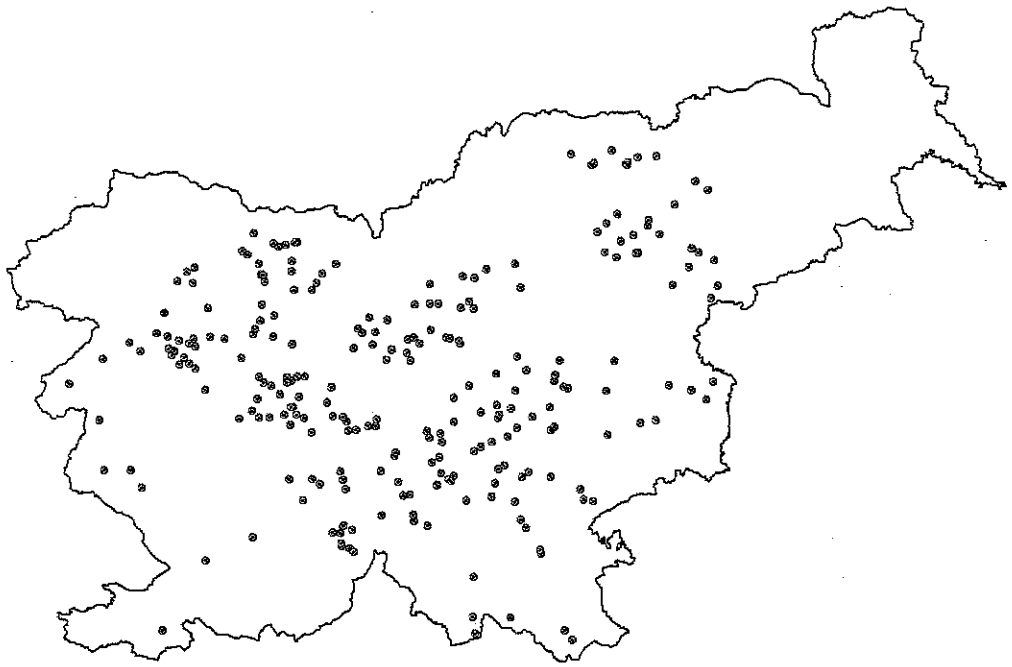

*Figure 3. Roost sites of the lesser horseshoe bat Slovenia (CKFF database, 16.6.2007)*

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The greater mouse-eared bat (***Myotis myotis***)

Current state of known and adequate sampling sites:
19 known sites of clusters of maternity colonies of the greater mouse-eared bat (Figure 4)

Number of sampling sites and number of bats:
10 sampling sites, 5 bats/site
(all bats sampled shall be ringed for the long-term monitoring of the state)

Number of operators in the field, and working days:
2 sampling operators, and 5 working days (approx. 2-3 sites/day)

Sampling date:
Indicatively, end of April and/or in July
(times of arrivals to and departures from the roost sites in Slovenia are unknown, and the times of births are more or less unknown as well – it is supposed that pups are born in the first half of June, allowing for the differences between the particular regions)

*Figure 4. Roost sites of the greater mouse-eared bat in Slovenia (CKFF database, 16.6.2007)*

The noctule bat (***Nyctalus noctula***), and the pipistrelle bat (***Pipistrellus* spp.**)

Current state of known and adequate sampling sites:
The two species roost in different crevices. Known roost sites of the noctule bat are in particular in the upper storeys of the Ljubljana housing estates, and roost sites of the pipistrelle bats (Kuhl's Pipistrelle - *Pipistrellus kuhlii*) may be found beneath the wainscot of buildings.

Number of sampling sites and number of bats:
5 sampling sites; up to 5 bats/site; bats need to be trapped in mist netting during the evening flying out from the roost
(all bats sampled shall be ringed for the long-term monitoring of the state)

Number of operators in the field, and working days:
3 sampling operators and 5 working days (1 evening netting/day)

Sampling date:
Indicatively, end of April and/or in July
(times of arrivals to and departures from the roost sites in Slovenia are unknown, and the times of births are more or less unknown as well – it is supposed that pups are born in the first half of June, allowing for the differences between the particular regions; the noctule bat frequently changes its roost sites)

## III. Targets

| *Region*[(b)] | *Type of the test*[(c)] | *Target population* [(d)] | *Type of sample*[(e)] | *Objective* [(f)] | *Number of planned tests* |
|---|---|---|---|---|---|
| SLOVENIA 2008 | FAVN | bat | blood | detection of Lyssaviruses | 500 |
| | RT-PCR | bat | swab | detection of Lyssaviruses | 500 |
| TOTAL | | | | | 1.000 |

### 7.1. Targets related to testing

*7.1.1. Targets on diagnostic tests*

7.1.1.1. Number and specification of tests

## IV. Detailed analysis of the cost of the programme[1]

| Costs related to | Specification | Number of units | Unitary cost in € | Total amount in € | Community funding requested (yes/no) |
|---|---|---|---|---|---|
| 1. Testing | | | | | |
| 1.1. Cost of the analysis | FAVN | 500 | 60,43 | 30.215,00 | NO |
| | RT - PCR | 500 | 40,19 | 20.095,00 | NO |
| 1.2. Cost of sampling | | 500 | 54,28 | 27.140,00 | NO |
| 1.3. Other costs | | | | | |
| TOTAL 2008 | | | | 77.450,00 | NO |

[1] Fixed costs should not be included. All amounts are VAT excluded.

| Costs related to | Specification | Number of units | Unitary cost in € | Total amount in € | Community funding requested (yes/no) |
|---|---|---|---|---|---|
| 1. Testing | | | | | |
| 1.1. Cost of the analysis | Direct FAT | 2.100 | 22,07 | 46.347,00 | Yes |
| | PCR (rabies virus isolates) | 40 | 87,64 | 3.505,60 | Yes |
| 1.2. Cost of sampling | Refund for hunters (per fox) | 1.600 | 15,00 | 24.000,00 | No |
| 1.3. Other costs | | | | | |
| 2. Vaccination or treatment | | | | | |
| 2.1. Purchase of vaccine | Vaccine baits | 855.000 | 0,6 | 513.000,00 | Yes |
| 2.2. Distribution costs | Aircraft distribution | 855.000 | 0,3837 | 328.063,50 | Yes |
| 2.3. Administering costs | | | | | |
| 2.4. Control costs | AB - ELISA | 1.600 | 14,46 | 23.136,00 | Yes |
| | Detection of biomatker | 1.600 | 10,11 | 16.176,00 | Yes |
| | Age determination | 1.600 | 23,65 | 37.840,00 | Yes |
| | Titration of baits | 6 | 134,23 | 805,38 | Yes |
| TOTAL 2008 | | | | 968.873,48 | Yes |
| TOTAL 2008 | | | | 24.000,00 | No |

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| 2. Vaccination or treatment | | | | | |
| 2.1. Purchase of vaccine | Vaccine baits | 900.000 | 0,6 | 540.000,00 | Yes |
| 2.2. Distribution costs | Aircraft distribution | 900.000 | 0,3837 | 345.330,00 | Yes |
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| | Titration of baits | 6 | 134,23 | 805,38 | Yes |
| TOTAL 2009 | | | | 1.013.139,98 | Yes |
| TOTAL 2009 | | | | 24.000,00 | No |

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| TOTAL 2011 | | | | 1.013.139,98 | Yes |
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| TOTAL 2012 | | | | 1.013.139,98 | Yes |
| TOTAL 2012 | | | | 24.000,00 | No |