



EUROPEAN COMMISSION
HEALTH & CONSUMERS DIRECTORATE-GENERAL
Unit 04 - Veterinary Control Programmes

SANCO/10490/2009

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

Multi-annual programme for the eradication of Rabies

Approved* for 2010 by Commission Decision 2009/883/EC

Latvia

* in accordance with Council Decision 2009/470/EC

ANNEX II

Standard requirements for the submission of programmes of monitoring, eradication and control of animal diseases co-financed by the Community

1. Identification of the programme

Member State: LATVIA

Disease(s)¹: RABIES

Year of implementation: 2008-2010

Reference of this document: ERADICATION PROGRAMME OF RABIES CO-FINANCED BY THE COMMUNITY

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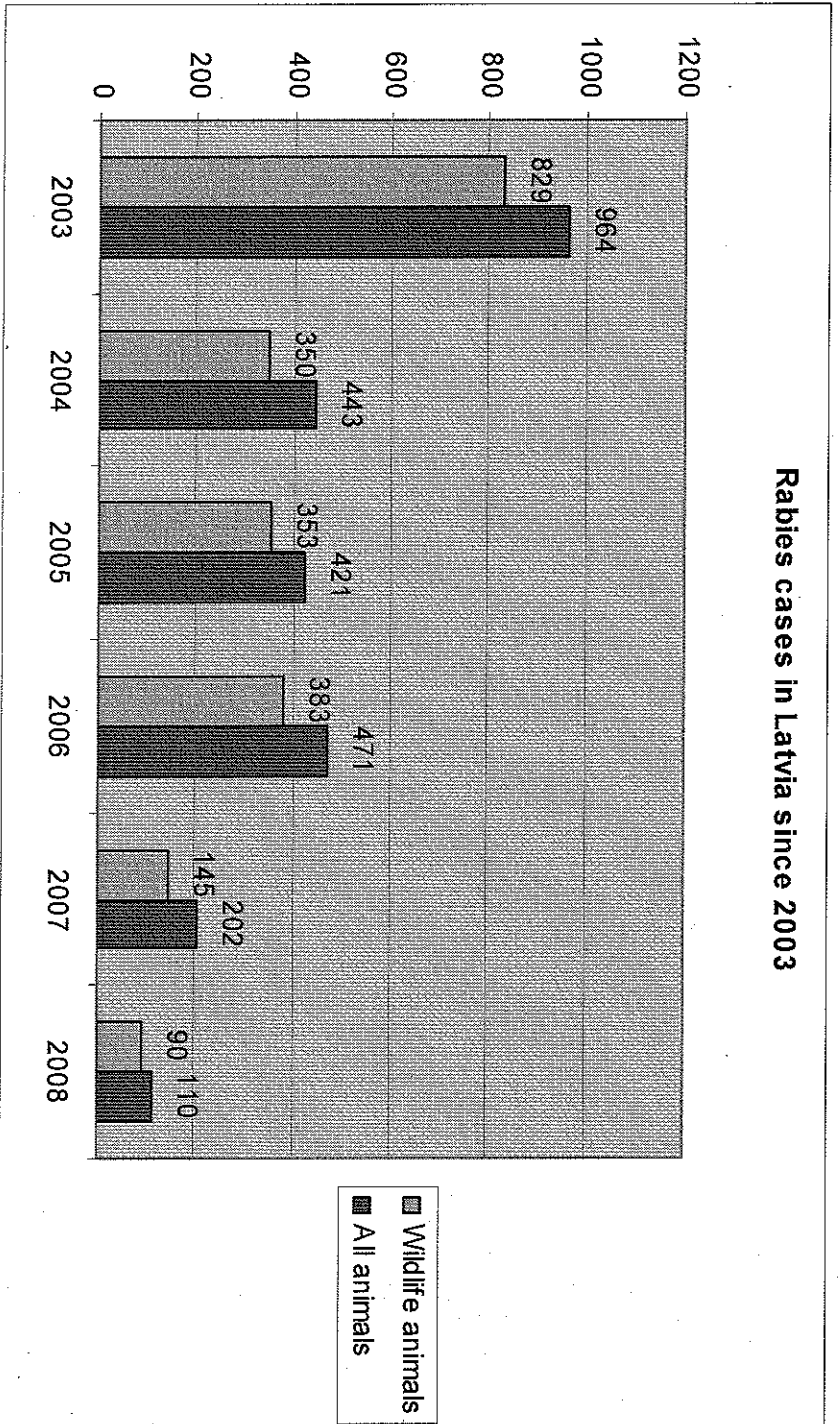
2. Historical data on the epidemiological evolution of the disease(s)²:

Canine rabies was registered in Latvia until 1960, the situation changed in early sixties when most of cases were registered in wild animals - foxes and racoon dogs. The outbreaks of rabies are recorded in all 26 administrative regions. One human case was reported in 2003. To reduce the prevalence of rabies and eliminate the sources of infection in the nature (wild animals) Food and Veterinary Service has started the oral vaccination of foxes since 1991. But because of deficiency of budget resources it was not possible to carry out regular vaccination (each year and in all territory of Latvia) and purchase necessary amount of vaccine. Since 2000 the vaccination was carried out in 17 districts, but since 2001 in all 26 administrative districts, but amount of vaccine baits was insufficient. Vaccination was carried out in autumn and spring by distributing vaccine baits twice with 14 days interval. There was no vaccination in 2004 due to delayed start of PHARE project. In 2005 oral vaccination campaigns were carried out in half of territory - 28 000 km² twice a year, providing 23 baits per 1 km². Starting from 2006 two vaccination campaigns was organized in all territory of Latvia when 23 - 25 baits per km² were distributed.

¹ One document per disease is used unless all measures of the programme on the target population are used for the monitoring, the control and eradication of different diseases.

² A concise description is given with data on the target population (species, number of herds and animals present and under the programme), the main measures (testing, testing and slaughter, testing and killing, qualification of herds and animals, vaccination ...) and the main results (incidence, prevalence, qualification of herds and animals). The information is given according distinct periods if the measures were substantially modified. The information is documented by relevant summary epidemiological tables, graphs or maps.

Rabies cases in Latvia since 2003



3. Description of the submitted programme³:

A concise description of the programme is given with the main objective(s) (monitoring, control, eradication, qualification of herds and/or regions, reducing prevalence and incidence ...), the main measures (testing, testing and slaughter, testing and killing, qualification of herds and animals, vaccination ...), the target animal population and the area(s) of implementation and the definition of a positive case.

The submitted programme is prepared with the purpose to distribute vaccine baits in whole territory of Latvia (64 635 km²) twice per year (spring and autumn) to immunize the main reservoirs of rabies in our country – foxes and raccoon dogs. **This is a multi-annual program for period 2008 – 2010.**

Total amount of vaccine baits to be used in each year is **3 200 000** for all the territory, distributing in two campaigns. **Totally 9 600 000 baits will be distributed within three year period (2008 to 2010). Vaccine baits will be distributed by airplanes.**

For the purpose to control efficiency of vaccination programme covers investigation of 8 animals (foxes, raccoon dogs) per 100 km² for antibody titre (using Biorad ELISA test), bait uptake (Detection of tetracycline in mandible tissue using luminescent microscopy) and rabies incidence control by Fluorescent antibody test (FAT).

4. Measures of the submitted programme

4.1. *Summary of measures under the programme*

Duration of the programme:

First year: **2008**

Last year: **2010**

Control

Eradication

Testing

Testing

Slaughter of positive animals

Slaughter of positive animals

Killing of positive animals

Killing of positive animals

Vaccination

Extended slaughter or killing

Treatment

Disposal of products

Disposal of products

Monitoring or surveillance

Other measures (specify):

4.2. *Designation of the central authority charged with supervising and coordinating the departments responsible for implementing the programme*⁴.

The **Food and Veterinary Service (FVS) of the Republic of Latvia** is a state administrative institution headed by the CVO and supervised by the Ministry of Agriculture.

The FVS consists of the central body placed in Riga and territorial structural units (the local level) – 26 regional offices and one city (Riga) office. The central body coordinates activities of the local level and ensure a unified implementation of legislation. The local level carries out the official surveillance in accordance with the state surveillance programmes.

The central authority of Food and Veterinary Service elaborates and coordinates the measures of rabies prophylaxis, control and eradication in the Republic of Latvia, registers and analyses rabies epizootic situation, participates at international animal infectious disease reporting systems. FVS also cooperates with specialists from self-governments, the State Forestry Service, National Environment Health centre and other institutions in order to carry out disease control.

⁴ Describe the authorities charged with supervising and coordinating the departments responsible for implementing the programme and the different operators involved. Describe the responsibilities of all involved.

State Senior Veterinary inspectors and State Veterinary inspectors are responsible on surveillance of epizootic situation concerning zoonoses in the territory, organize, coordinate and control execution of demands determined in state; coordinate involvement of state authorized veterinarians in system of state surveillance of zoonoses.

State Authorized Veterinarians carry out several tasks of prophylaxis and eradication of zoonoses determined in legislation and in regulation documentation of FVS. They are involved in Rabies passive surveillance.

4.3. Description and delimitation of the geographical and administrative areas in which the programme is to be implemented⁵:

Program will be implemented in all administrative regions. Total area of republic of Latvia: 64635 km².

Latvia lies on the Eastern coast of the Baltic Sea. The combined length of the national borders is 1862 km. The length of land borders with Estonia - 343 km, the Eastern with Russia - 282 km, the Southeast with Byelorussia - 167 km and the Southern with Lithuania - 576 km. The length of sea border is 494 km.

Taking into account above described situation when rabies has been registered in the whole territory of Latvia, the number of main infection carriers - wild animals - foxes and racoon dogs is impermissible high and there is no geographical barrier that could limit the distribution of infection, with an exception of the Baltic Sea in the West and the Gulf of Riga in the North.

4.4. Measures implemented under the programme⁶

4.4.1. Measures and terms of legislation as regards the registration of holdings:

4.4.2. Measures and terms of legislation as regards the identification of animals⁷:

4.4.3. Measures and terms of legislation as regards the notification of the disease:

- Regulation of Cabinet of Ministers No 298, 22 April 2006 "Procedures for Prevention and Combating of Such Infectious Diseases as to Which Both Animals and Humans are Susceptible" determines how to carry out prophylaxes and eradication of such infectious diseases (zoonoses) as to which both animals and humans are susceptible.

- Food and Veterinary Service Instruction Order No 215, 3 September, 2001 "On prophylaxis and eradication of Rabies"

⁵ Describe the name and denomination, the administrative boundaries, and the surface of the administrative and geographical areas in which the programme is to be applied. Illustrate with maps.

⁶ Where appropriate Community legislation is mentioned. Otherwise the national legislation is mentioned.

⁷ Not applicable for poultry.

4.4.5. *Measures and terms of legislation as regards the different qualifications of animals and herds:*

4.4.6. *Control procedures and in particular rules on the movement of animals liable to be affected or contaminated by a given disease and the regular inspection of the holdings or areas concerned⁸:*

4.4.7. *Measures and terms of legislation as regards the control (testing, vaccination, ...) of the disease:*

- On the basis of Law on Veterinary Medicine, FVS prepare annual animal infectious disease surveillance plan, including Rabies determining monitoring tests and amount of vaccine to be distributed in wildlife area.

All measures are carried out on basis of following documents:

- Regulation of Cabinet of Ministers No 298, 22 April 2006 "Procedures for Prevention and Combating of Such Infectious Diseases as to Which Both Animals and Humans are Susceptible" determines how to carry out prophylaxis and eradication of such infectious diseases (zoonoses) as to which both animals and humans are susceptible.

- Food and Veterinary Service Instruction Order No 215, 3 September, 2001) "On prophylaxis and eradication of Rabies"
Both documents regulate Rabies control measures when rabies is suspected or confirmed.

Regarding oral vaccination of wildlife, there is Animal Infectious Disease State Surveillance Program, approved annually by CVO, where Chapter on oral vaccination is included. Program defines area to be vaccinated, number of vaccine baits and campaigns per year, as well as efficiency evaluation of vaccination campaigns.

⁸ A short description of the control procedures and in particular rules on the movement of animals liable to be affected or contaminated by a given disease and the regular inspection of the holdings or areas is provided.

5. General description of the costs and benefits⁹:

Total costs of the programme per year are **2 412 079.20 Euro**. The general purpose of the programme is to eradicate Rabies in wild population (foxes and racoon dogs) by oral vaccination in the whole territory of Latvia (64 635 km²) twice a year.

Total amount of vaccine baits to be used in 2009 is **3 200 000** distributed in two campaigns (spring and autumn). The same strategy will be applied in 2010. During 2010 the current program will be re-evaluated and according to Rabies epidemiological situation in Latvia and neighbouring countries new program will be prepared.

⁹ A description is provided of all costs for the authorities and society and the benefits for farmers and society in general.

6. Stratified data on surveillance and laboratory tests

6.1. Stratified data on surveillance and laboratory tests (one table per year and per disease/species)

Description of the used virological tests: Fluorescent antibody test, OIE Manual,2004, chapter 2.2.5.B.1.c),j), p.331;

Mouse inoculation test; OIE Manual,2004, chapter 2.2.5.B.1.c),j), p.331.

..... Virus isolation in cell cultures

2002

Animal species ^(c)	Serological tests		Virological tests		Other tests	
	Number of samples tested ^(d)	Number of positive samples ^(e)	Number of samples tested ^(d)	Number of positive samples ^(e)	Number of samples tested ^(d)	Number of positive samples ^(e)
horses		6		4		
cows		51		22		
dogs		194		31		
cats		161		32		
fur animals		2		-		
wild animals		774		411		
others		9		-		
Total		1197		500		

Animal species ^(c)	Serological tests		Virological tests		Other tests	
	Number of samples tested ^(c)	Number of positive samples ^(e)	Number of samples tested ^(d)	Number of positive samples ^(e)	Number of samples tested ^(d)	Number of positive samples ^(e)
horses			3	-		
cows			58	20		
dogs			302	63		
cats			243	52		
foxes			725	474		
raccoon dogs			412	284		
badger			54	32		
ferrets			40	10		
marten			42	14		
beaver			18	5		
roe			16	5		
fur animals			5	1		
wild animals			22	3		
others			5	1		
Total			1945	964		

Animal species ^(a)	Serological tests		Virological tests		Other tests	
	Number of samples tested ^(d)	Number of positive samples ^(e)	Number of samples tested ^(d)	Number of positive samples ^(e)	Number of samples tested ^(d)	Number of positive samples ^(e)
horses	2		-			
cows	52		25			
dogs	174		33			
cats	198		35			
foxes	409		181			
raccoon dogs	231		143			
badger	16		10			
ferrets	12		3			
marten	29		3			
beaver	5		1			
roe	36		8			
fur animals	5		-			
wild animals	13		-			
others	24		1			
Total	1206		443			

Animal species ^(c)	Serological tests		Virological tests		Other tests	
	Number of samples tested ^(d)	Number of positive samples ^(e)	Number of samples tested ^(d)	Number of positive samples ^(e)	Number of samples tested ^(d)	Number of positive samples ^(e)
horses			2	1		
cows			42	17		
dogs			157	20		
cats			170	29		
foxes			402	176		
raccoon dogs			222	137		
badger			21	13		
ferrets			16	5		
marten			24	9		
beaver			11	2		
roe			38	7		
other wild animals			28	4		
others			7	1		
Total			1140	421		

(a) Disease and animal species if necessary.

(b) Breeders, laying hens, etc, when appropriate

(c) Region as defined in the approved eradication programme of the Member State.

(d) Number of samples tested, all confounded.

(e) Number of positive samples, all confounded

Animal species ^(c)	Serological tests		Virological tests		Other tests	
	Number of samples tested ^(d)	Number of positive samples ^(e)	Number of samples tested ^(d)	Number of positive samples ^(e)	Number of samples tested ^(d)	Number of positive samples ^(e)
cows			-	13		
dogs			-	31		
cats			-	44		
foxes			-	187		
raccoon dogs			-	153		
other wild animals			-	43		
Total			1045	471		

- (a) Disease and animal species, if necessary.
 (b) Breeders, laying hens, etc, when appropriate
 (c) Region as defined in the approved eradication programme of the Member State.
 (d) Number of samples tested, all confounded.
 (e) Number of positive samples, all confounded

Animal species ^(c)	Serological tests		Virological tests		Other tests	
	Number of samples tested ^(d)	Number of positive samples ^(e)	Number of samples tested ^(d)	Number of positive samples ^(e)	Number of samples tested ^(d)	Number of positive samples ^(e)
horses			2	0		
cows			16	5		
dogs			133	25		
cats			192	27		
foxes			305	95		
raccoon dogs			134	33		
badger			15	3		
ferrets			26	5		
marten			30	4		
mink			12	1		
roe			39	1		
other wild animals			28	3		
Domestic animals			3	0		
Total			935	202		

- (a) Disease and animal species if necessary.
 (b) Breeders, laying hens, etc, when appropriate
 (c) Region as defined in the approved eradication programme of the Member State.
 (d) Number of samples tested, all confounded.
 (e) Number of positive samples, all confounded

6.2. Data on infection (one table per year and per disease/species)

Year: 1999-2007

Disease^(a): Rabies

Animal species: Domestic and wildlife animals

Latvia	Number of herds infected ^(b)	Number of animals infected
1999	-	169
2000	-	516
2001	-	477
2002	-	500
2003	-	964
2004	-	443
2005	-	421
2006	-	471
2007	-	202

(a) Disease and animal species if necessary.

(b) Region as defined in the eradication programme of the Member State.

(c) Herds equal flocks, or holdings as appropriate.

6.3. Data on wildlife¹⁰

6.3.1. Estimation of wildlife population

Data on wildlife population is obtained from State Forest Service and figures about populations in 2007 will be available on April 1, 2007.

Year: 1999-2006

Method of estimation^(a):

Latvia	Estimation of the population of the concerned wild species			
	Species: Foxes	Species: Raccoon dogs	Species: Wolves	Species: Bobcats
1999	26177	11740	572	671
2000	27649	12657	544	648
2001	29083	14022	473	667
2002	30044	15096	566	750
2003	28713	15901	673	765
2004	30893	17258	603	824
2005	32294	19384	588	1006
2006	33064	20156	550	863

Latvia	Estimation of the population of the concerned wild species			
	Species: Badgers	Species: Martens	Species: Minks	Species: Otters
1999	8062	18566	15353	6746
2000	8291	20470	16486	7035
2001	8852	21880	17979	7766
2002	9364	22902	19065	8194
2003	9795	No data	18388	7733
2004	10771	22532	20440	8784
2005	10586	21614	22655	8899

¹⁰ Data to provide for Bovine brucellosis, Ovine and caprine brucellosis (B. melitensis), Aujeszky's disease, African Swine fever, swine vesicular disease, endemic classical swine fever, Rabies, Echinococcosis and trichinellosis and agents thereof.

2006	10518	21975	23100	8585
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Latvia	Estimation of the population of the concerned wild species			
	Species: Beavers	Species: Polecats	Species: Roes	Species: Elks
1999	42614	6591	55551	10595
2000	45706	7487	68183	11873
2001	51934	8932	79622	13229
2002	54684	9941	95098	14218
2003	62138	9600	110759	13793
2004	66886	11066	129576	14494
2005	73502	12284	150120	14498
2006	77474	11660	195841	14488

- (a) The hunting bag is considered to be the standard method of estimation. If other method is used, explain
 (b) Region as defined in the approved eradication programme of the Member State

6.3.2. *Monitoring of wildlife (one table per year and per disease/species)*

Year: 2001-2007 Disease^(b): Rabies Animal species: Foxes and racoon dogs

Description of the other used tests:

In 2005 tests for detection of antibody level: ¹FAVN and ELISA² (samples considered positive if antibody level $\geq 0,5$ IU/ml). In 2006 only ELISA test was used to detect antibody level (seroconversion).

³Detection of tetracycline in mandible tissue using luminescent microscopy (samples collected from animals hunted in vaccinated territory).

⁴ Fluorescent antibody tests (samples collected from animals hunted in vaccinated territory).

Results are provided for period November and December, 2006 although samples were collected also in January, February and March, 2007 to evaluate vaccination campaigns of 2006.

Regarding vaccination efficiency control after campaigns in 2007 – samples were collected during period of October, 2007 till March, 2008. Results are included in the table below.

Larvia	Microbiological or virological tests ⁴		Serological tests		Other tests ³	
	Number of samples tested	Number of positive samples	Number of samples tested	Number of positive samples	Number of samples tested	Number of positive samples
2001	-	-	-	-	285	151
2002	-	-	-	-	319	175

2003	-	-	-	501	209
2004	-	-	-	257	98
2005	-	-	509 ¹ / 1219 ²	1678	901
2006	737	11	731	736	620
2007	4579	28	4621	4628	3392
			2176		

(a) Disease and species if necessary

(b) Region as defined in the approved eradication programme of the Member State

6.3.3. *Data on vaccination or treatment of wildlife*

Year: 1999-2007

Disease^(a): Rabies

Animal species: foxes and racoon dogs

Description of the used vaccination scheme: Rabies oral vaccine baits were distributed manually near the fox's caverns till 2003. In 2005 and 2006 baits were distributed using airplanes and helicopters. Distance between flight lines was 1 km. Vaccines were distributed during two campaigns (spring and autumn).

Latvia	Square km	Vaccination or treatment programme		
		Number of doses of vaccine or treatment to be administered	Number of campaigns	Total number of doses of vaccine or treatment administered
1998 (Vaccination was not carried out in all territory of Latvia)	*	56100	2	56100
1999 (Vaccination was not carried out in all territory of Latvia)	*	60000	2	60000
2000 (Vaccination was not carried out in all territory of Latvia)	*	89000	2	89000
2001	*	310000	2	310000
2002	*	300000	2	300000
2003	*	300000	2	300000
2004	0	0	0	0
2005	28000	1247200	2	1247200
2006	64000	3372000	2	3372000
2007	64000	3351600	2	3351600
Total				

(a) Disease and species if necessary

(b) Region as defined in the approved eradication programme of the Member State

7. Targets

7.1. Targets related to testing

7.1.1. Targets on diagnostic tests

7.1.1.1. Number and specification of tests

Disease^(a): RABIES

Animal species: Foxes and raccoon dogs

Period 2010

Region ^(b)	Type of the test ^(c)	Target population ^(d)	Type of sample ^(e)	Objective ^(f)	Number of planned tests
Latvia	Biorad Enzyme-linked Immunosorbent assay (ELISA)	Foxes and raccoon dogs	Serum	Efficiency of vaccination campaign	5 120
	Fluorescent antibody test (FAT)	Foxes and raccoon dogs	Brain tissue	Efficiency of vaccination campaign	5 120
	Detection of tetraacycline in mandible tissue using luminescent microscopy	Foxes and raccoon dogs	Mandible	Efficiency of vaccination campaign	5 120
Total					15 360

- (a) Disease and species if necessary
- (b) Region as defined in the approved eradication programme of the Member State
- (c) Description of the test (e.g. SN-test, AB-Elisa, RBT, ...)
- (d) Specification of the targeted species and the categories of targeted animals (e.g. sex, age, breeding animal, slaughter animal, ...).
- (e) Description of the sample (e.g. blood, serum, milk, ...)
- (f) Description of the objective (e.g. qualification, surveillance, confirmation of suspected cases, monitoring of campaigns, seroconversion, control on deleted vaccines, testing of vaccine, control of vaccination, ...)

7.1.1.2. Testing scheme(s)¹¹:

According to Order, issued by Chief Veterinary Officer, determining number of samples and area where to collect animals for investigation. Efficiency of vaccination campaigns is evaluated in all regions where vaccines are distributed and 8 animals per 100 km² should be submitted to laboratory for testing. Samples are collected in collaboration with hunters and FVS territorial units are responsible for receiving and sending of samples to the laboratory.

¹¹

Describe the testing scheme according the different categories if appropriate (which herds and animals, the number of animals per herd, the frequency and the interval of sampling) with reference to the national and Community legislation where appropriate.

7.2. Targets on vaccination or treatment¹² of wildlife

Disease^(a): Rabies

Animal species: Foxes and racoon dogs

It is planned to distribute vaccine baits evenly in all country for the next year (2010), because Rabies is still endemic in all regions in Latvia. During 2010 we will evaluate situation and if necessary elaborate new vaccination strategy (separate regions, different distance between flight lines, bait density etc.) taking into account Rabies situation within three next years.

Period 2010

Region ^(b)	Square km	Targets on the vaccination or treatment programme		
		Number of doses of vaccine or treatments expected to be administered in the campaign	Expected number of campaigns	Total number of doses of vaccine or treatment expected to be administered
Latvia	64635 km ²	1 600 000	2	3 200 000
Total	64635 km²	1 600 000	2	3 200 000

- (a) Disease and species if necessary
 (b) Region as defined in the approved eradication programme of the Member State

8. Detailed analysis of the cost of the programme¹³ Period 2010

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	Test: BIORAD ELISA	5 120	16,82	86118,4	Yes
	Test: FAT	5 120	16,12	82534,4	Yes
	Test: Detection of tetracycline in mandible	5 120	12,12	62054,4	Yes
1.2. Cost of sampling					
1.3. Other costs	Hunting and delivery costs (foxes and raccoon dogs)	5 120	15,00	76 800,0	Yes
	Storage of vaccine	12 months	712,2	8 546,4	Yes
2. Vaccination or treatment					
2.1. Purchase of vaccine/treatment	Vaccine baits	3 200 000	0,50	1 600 000	Yes
2.2. Distribution costs	Vaccine aerial distribution	128 000 km ²	4,27	546 560	Yes
2.3. Administering costs					
2.4. Control costs					
3. Slaughter and destruction					

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

3.1. Compensation of animals							
3.2. Transport costs							
3.3. Destruction costs							
3.4. Loss in case of slaughtering							
3.5. Costs from treatment of products (milk, eggs, hatching eggs, etc)							
4. Cleaning and disinfection							
5. Salaries (staff contracted for the programme only)							
6. Consumables and specific equipment							
7. Other costs							
TOTAL						2 462 613,60	