



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

SANCO/12999/2010

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

Eradication programme of Rabies

Approved* for 2011 by Commission Decision 2010/712/EU

Romania

* in accordance with Council Decision 2009/470/EU

Programme for Surveillance, Control and Eradication of Rabies in Romania 2011

Summary:

1. Identification of the programme
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Identification of the programme

Member State: Romania

Disease: Rabies

Application year: 2011

Reference of this document: N.S.V.F.S.A.

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2. Historical data on the epidemiological evolution of rabies in Romania.

Rabies is a mortal, acute encephalitis of warm blooded animals and humans, caused by a RNA-virus of Lyssavirus Families, which spread mainly by the saliva of diseased animals, as a result of their bites. The disease can also spread by the contamination of wounds of the skin or mucosal membranes with the saliva of the diseased animals. All warm blooded animals are affected. Rabies has two clinical forms – furious and dumb. Both forms are characterized by signs showing the affection of the central nervous system, behavioral deviation, salivation and the paralysis of the skeletal and pharyngeal muscles. Incubation period for rabies is between 14 days and 6 months, or more. An animal infected by rabies can spread the virus up to 10 days before the appearance of clinical signs. After showing the clinical signs, the animal dies in 10 days.

Rabies is disseminated on the whole globe, except certain countries in which, due to geographical particularities, either the virus never entered or the country became free of the disease, consequently to the application of certain serious combating measures (Luxemburg, Island, Norway).

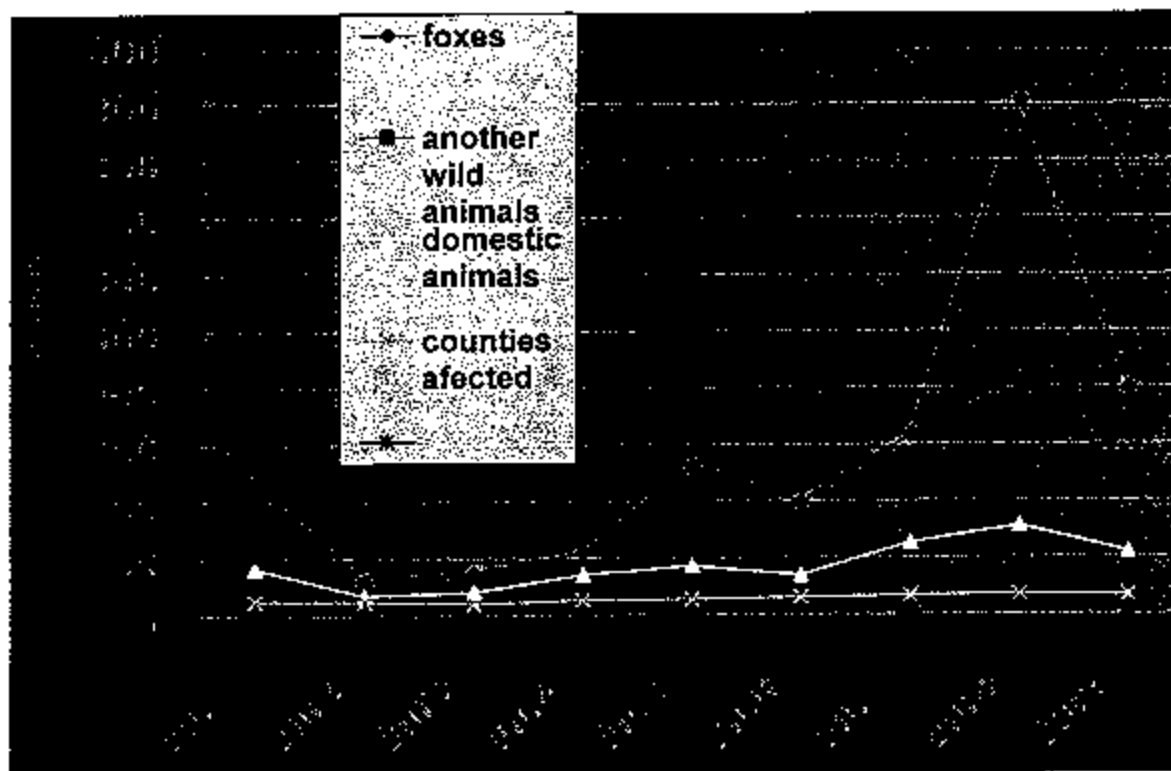
Lately, it was noticed a recrudescence of rabies in different regions of the world due to maintenance of the virus in the population of wild animals.

Romania, in the past, was one of the countries having the highest number of rabies cases from Europe.

Starting with 1950, following the measures applied, including immune- prophylaxis, rabies became preponderantly limited to wild carnivores, especially foxes.

The number of cases in foxes, in comparison with the number of cases in other wild and domestic animals, in an 9 years period (1999-2008), is shown in *Graphic 1*.

Number of rabies cases between 1999-2009 in animals population of Romania



Graphic 1

Foxes population of Romania

Romania has a surface of more than 237500 km² of which 62346 km² is covered by forests. (Diagram 1).



Diagram 1

In Diagram 2, is represented the percentage of geographical distribution of a over than 55.000 fox population in 2009, distributed per counties. The fox population is distributed in 2151 hunting grounds managed by the National Forests Administration and the Association of Hunters and Fishers at which these are officially registered (Graphic 2). From numerical point of view, the fox livestock in Romania, in the last years, is maintained in constant limits, which determine that their density to be under 1 animal per km².

The stock-taking of foxes is done annually in spring, when is also established the cote for fox hunting.

Geographical distribution of foxes in Romania, 2009

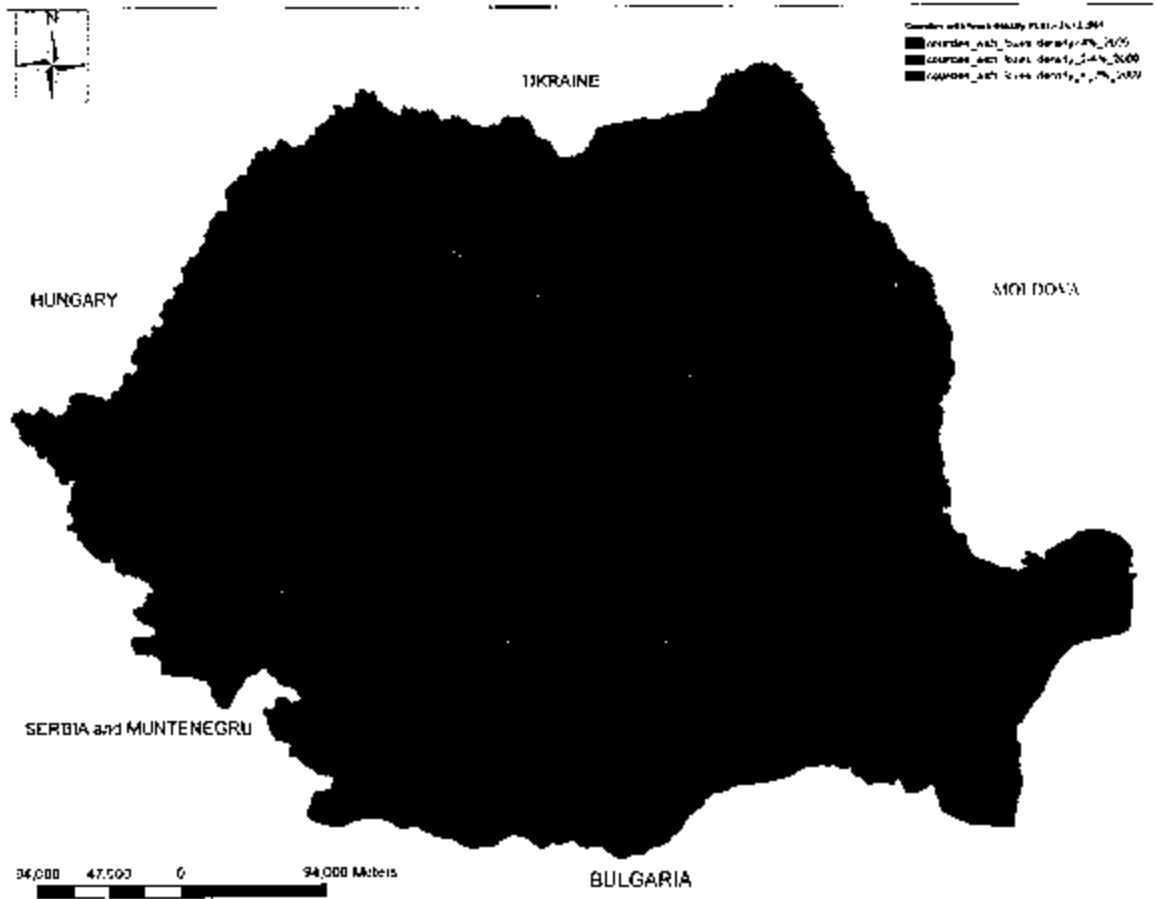
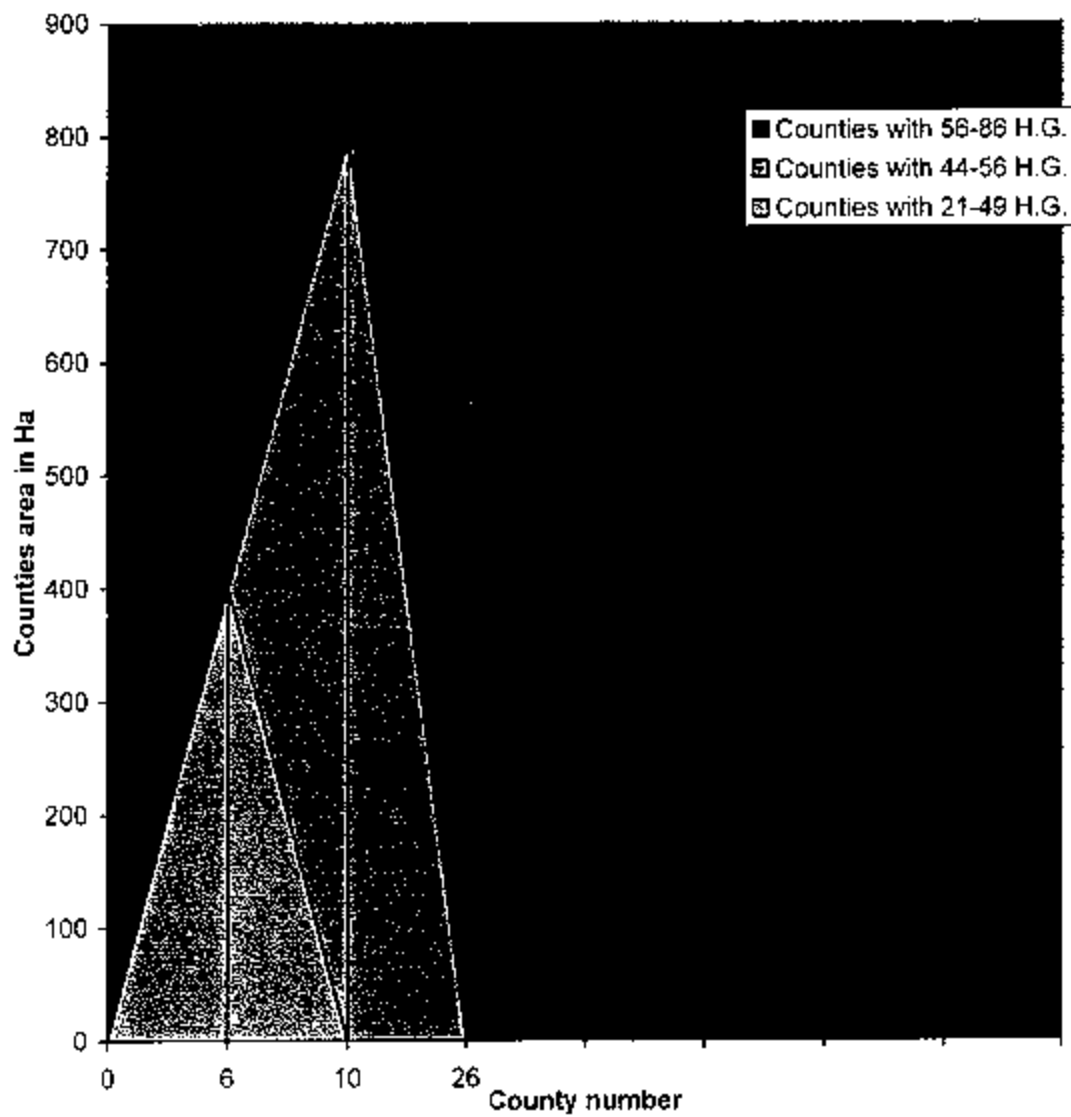


Diagram 2

Graphic 2. Repartition of hunting grounds (H.G.) depending on the counties surface



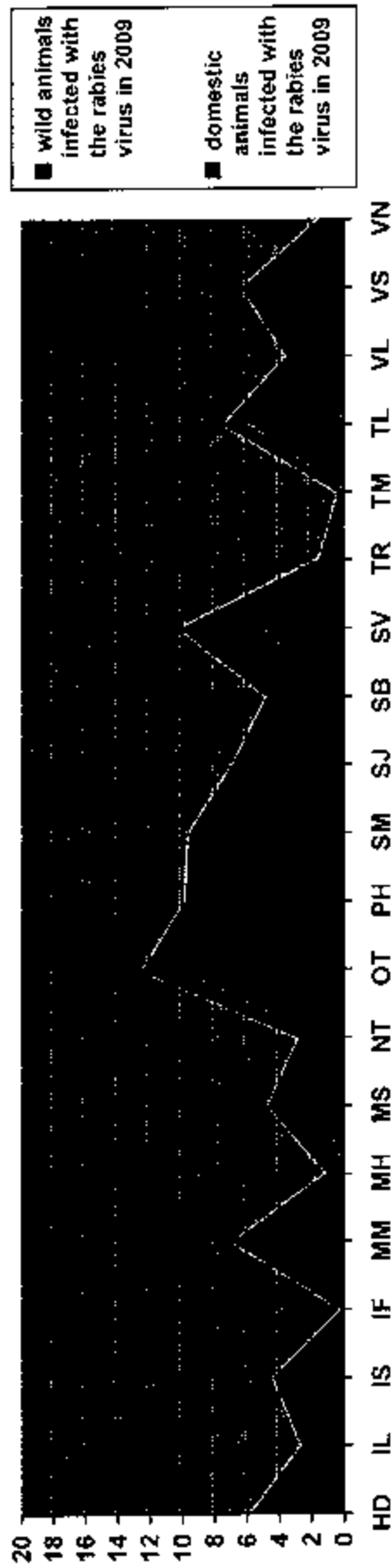
Rabies situation in foxes in Romania

Rabies in foxes living in forests evolves for many years.

By analysis of Graphic 1, where are presented the number of rabies cases occurred in the last 9 years in domestic and wild animals, it can be appreciated that rabies is an endemic disease with increasing evolutionary tendencies.

The association between the number of rabies cases in fox population and in domestic animals population is sustained by *Graphic 3*. In Diagram 3 is presented the percent of domestic and wild animals infected with the rabies virus, distributed per counties, in 2009.

It must be added, that the Danube Delta is a particular area, protected under the Administration of Biosphere's Reservation, where beside the fox population and other wild animals, are also living domestic animals in a semi wild condition.



Graphic 3

Rabies prevalence in foxes, Romania 2009

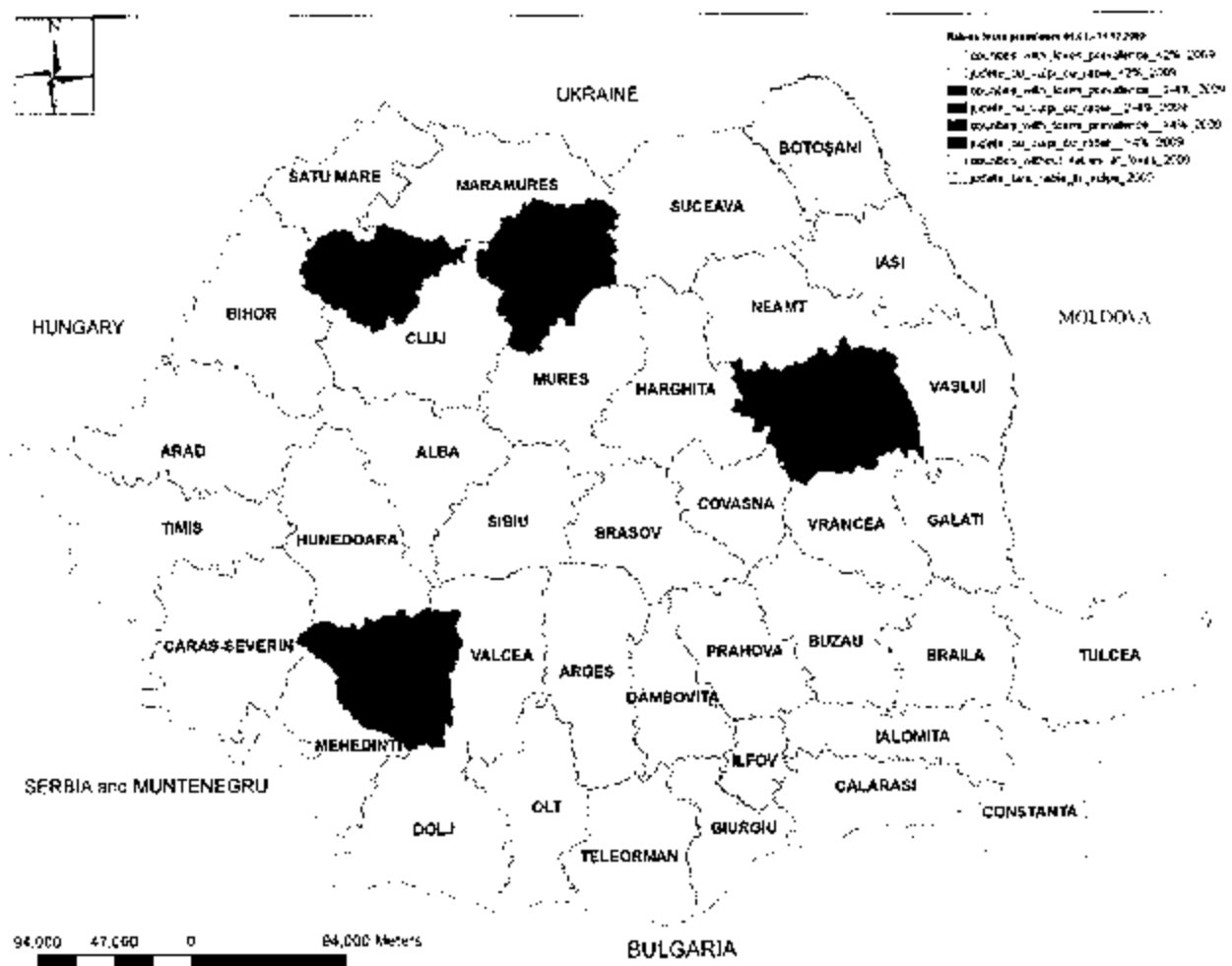


Diagram 3

Rabies situation in wild animals, other than foxes

Species of domestic animals affected by rabies in Romania, in the last 9 years are presented in Table no. 1.

Against the situation presented, it can be appreciated that rabies evolves sporadically in the population of wild animals, other than foxes, its occurrence not being dependent of the existence of infected foxes in the relevant area.

Number of rabies cases in wild animals, included foxes in Romania 2001-2009

Year/Species	2001	2002	2003	2004	2005	2006	2007	2008	2009
Cat	1	1	1	3	3	6	1	4	4
Ferret		1	1		3		1	0	1
Badger	2	5		2			1	2	2
Jackal					1	2	1	2	0
Otter	1						1	0	0
Musk	1						0	0	0
Weasel			1				0	0	0
Fallow-Deer			1				0	0	0
Marten				1	1		2	1	1
Bear				1	1		1	0	0
Deer				1			0	3	0
Boar					1		0	0	1
Linx					1		0	0	0
Wolf	1		3	1	1	1	2	6	7
other						5		8	1 (bat)
Total	6	7	7	9	12	20	10	26	17
Foxes	237	65	79	115	269	203	322	912	404

Table no. 1

Situation of rabies in domestic animals in Romania

Species of domestic animals in which rabies cases were registered on the territory of Romania, in the last 9 years, are presented in Table no. 2.

Rabies cases registered in domestic animals within 2001-2009

Animal/Species	2001	2002	2003	2004	2005	2006	2007	2008	2009
Dogs	45	18	17	33	35	27	47	43	38
Cats	13	11	12	18	31	19	36	60	29
Bovine	16	5	12	14	17	19	32	35	31
Horses		3	1	4	4	3	6	14	2
Sheeps	5	1	5	5	1	1	1	5	11
Goats					1	2	6	4	3
Pigs	5	2		1		2	4	0	1
Buffalos					1		0	0	0
Asinine					1		0	0	0
Total	84	40	47	75	91	73	132	161	115

Table no. 2

Among these, most rabies cases were registered in the dog population, but an important number of cases were also registered in the feline and bovine populations. (Diagram 4.)

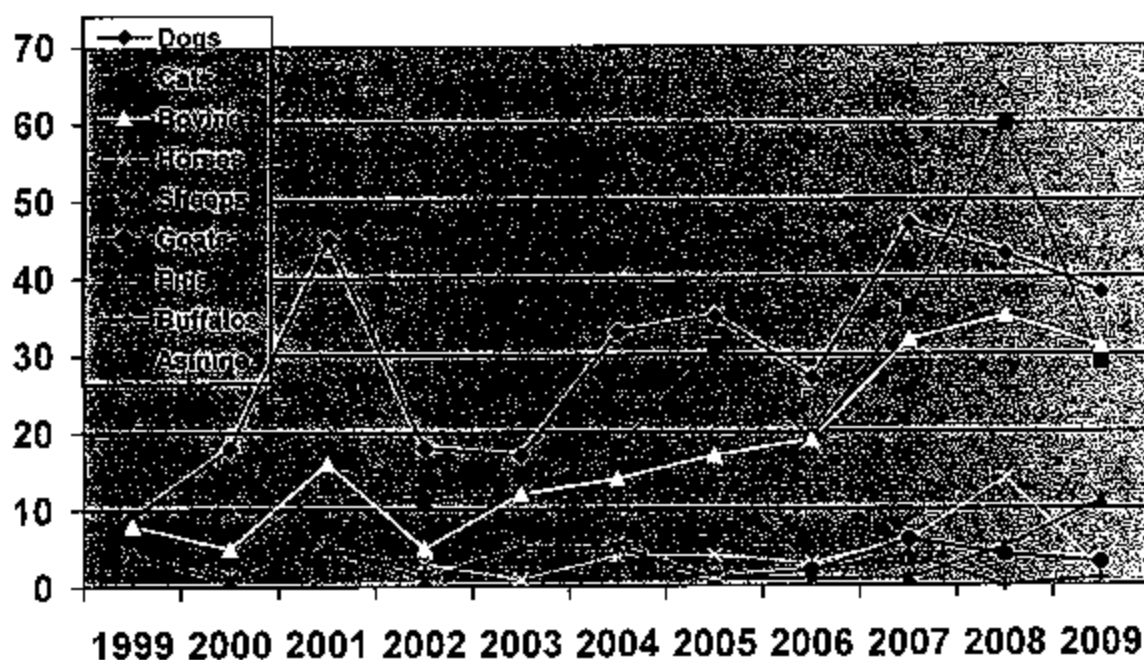


Diagram 4

3. Description of the programme

The Programme for Monitoring, Control and Eradication of Rabies will rule on the entire territory of Romania and it will apply to the entire population of foxes.

3.1. The objectives of the programme comprise:

- control of rabies in fox population in Romania
- monitoring of rabies in fox population in Romania
- vaccination effectiveness

3.2. Actions undertaken for fulfilment of the objectives:

- oral vaccination of wildlife in order to obtain an territory free of rabies.
- monitoring of evolution of rabies correlated with the plan for application of vaccination and the results obtained
- control of the application of vaccination plans and evaluation of its effectiveness
- collection of data, their proper registration, their statistic and informatics procession and their presentation in proper forms in order to be used in the practice of combating and eradication of rabies in Romania.

Oral vaccination of foxes will be carry out in two vaccination campaigns, in spring and autumn, spreading by plane, 20 baits/campaign/km². Aerial distribution of baits will be fill in with manual distribution, where the plane can not act. After each campaign, 45 days later from baits administration, will be performed hunting for vaccine efficiency, shooting 4 foxes/campaign/100km².

For monitoring, samples harvest from shooting foxes will be tested for post vaccination antibody and tetracycline presence.

Rabies surveillance will be carrying out on samples from indicator animals (suspected, found dead or road kills).

4. Measures provided in the submitted programme

4.1 Duration of the programme: 10 years

First year: 2007

- Control
- Testing
- Vaccination

Last year: 2016

- Eradication
- Testing

4.2 Organizing, surveillance and the role of all stakeholders involved in the programme

The main institutions implicated in the application of the programme for control, monitoring and eradication of rabies are:

National Sanitary Veterinary and Food Safety Authority (NSVFS), County Sanitary Veterinary and Food Safety Divisions (CSVFS), Institute for Diagnosis and Animal Health, National Administration of Forests, District Forest Ranges, Associations of Hunters and Fishers of Romania, Institute for Control of Biological Products and Medicines for Veterinary Use.

National Sanitary Veterinary and Food Safety Authority

The tasks of the central sanitary veterinary authority responsible are to supervise and coordinate the departments which implement the Programme.

NSVSA is also responsible for assuring funds to cover the needs created by implementation of the Program.

At county level, responsible for the Program implementing are the all the County Sanitary Veterinary and Food Safety Directorates.

NSVFS, invested as Central Units for acquisition of services in view of foxes vaccination is responsible for organizing the tender and for monitoring and evaluation of vaccination efficacy, as well as the activity conducted by the society selected as winner of tender.

CSVFSD verify the transport and vaccine storage conditions, monitors the vaccine circulation within the territory, and controls the training of personnel in charge with vaccination.

Institute for Diagnosis and Animal Health

The main responsibilities are:

- co-ordinates and administrates the testing capacity of the county laboratories, the training of personnel to apply the diagnosis methods;
- coordinates the diagnostic activity for rabies;
- draw up the epidemiological reports, based on the interpretation of the results regarding rabies;
- being the National Reference Laboratory, cooperates with Community Reference Laboratory for rabies for typing and subtyping wild strain rabies viruses.

Institute for Control of Biological Products and Medicines for Veterinary Use

The main responsibilities are:

- Authorizes, for commercialization, biological products used for immunization against rabies in Romania;
- Performs the quality control of all vaccine batches against rabies, accordingly with OIE Diagnostic Manual;
- Provides consultancy regarding biological products used for the immunization against rabies in Romania;

National Administration of Forests

The main responsibilities are:

- assures the maintenance of foxes population in reasonable limits within areas, by performing the seasonal hunting approved as a supplement to the already approved hunting quota; approve supplementary hunting quota outside the legal hunting season in the scope of sustaining the present Program;
- assures, by the personnel from cynegetic fund, the achievement of sampling and transmission of the samples for accomplish of laboratory surveillance for the diagnosis of rabies, accordingly with the approved sampling program and for the evaluation of postvaccinal immunization;
- assures the functioning of the system for collecting, transport and neutralizing of cadavers.

National Administration of Forests estimates each year the foxes number and establishes the annual quota of foxes proposed to be hunted.

Associations of Ranges, Hunters and Fishermen of Romania

The main responsibilities are:

- monitoring and evaluate the density of foxes population from Romania's cynegetic fund;
- monitoring and control the implementation measures which are incumbent on the administrators of hunting funds;
- cooperates with CSVFSD for the implementation of the Program;

Associations of Rangers, Hunters and Fishermen of Romania organizes the hunting sessions following to the vaccination campaigns, assure the transport of the samples harvested by the personnel in charge with sampling at the level of CSFSD.

4.3 Descriptions and demarcations of the geographical and administrative areas in which the programme is to be implemented:

The Programme will rule on in all the country, taking into account the whole territory.

It will be taken into account the entire surface of approximately 237.000 km², being distributed 20 vaccine-doses/km². The surface covered by forests of the above mentioned a vaccination area is over 62.000 km².

Geographical delimitations by natural barriers in Romania

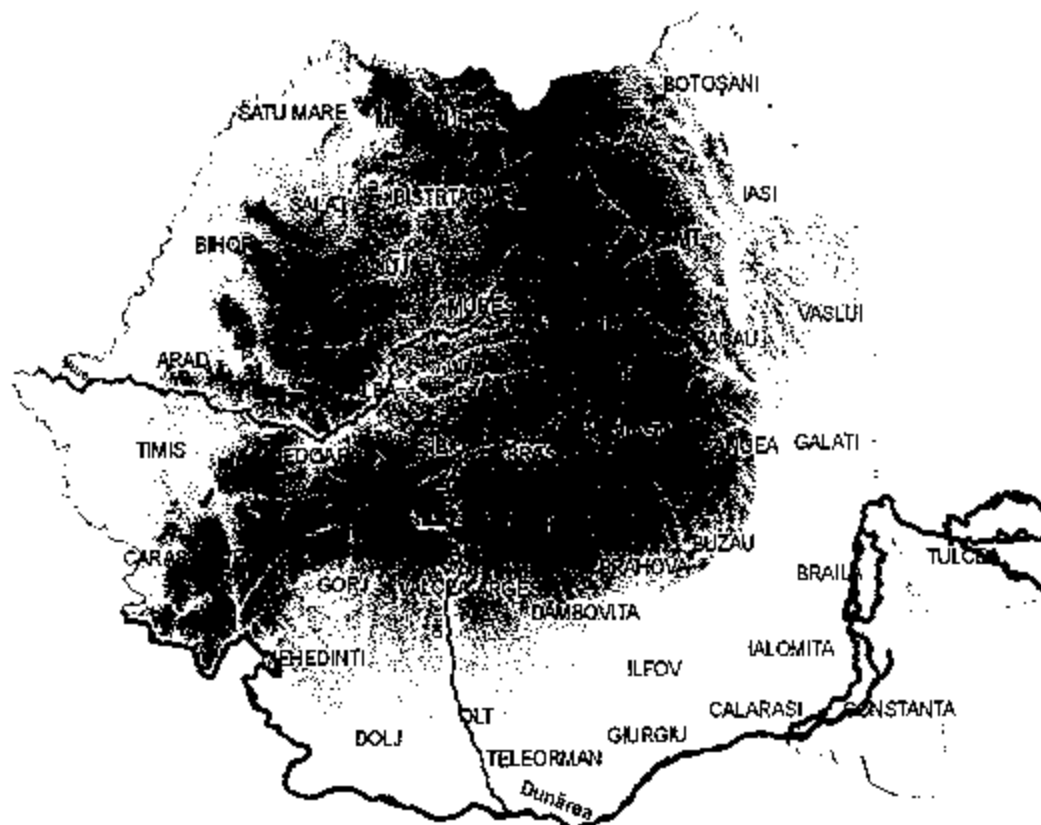


Diagram 5

- Carpathian Mountains Chain
- Rivers

Rabies vaccination area for 2011

The vaccination area for 2011 will be the whole territory of the country, in 237.000 km² surface.

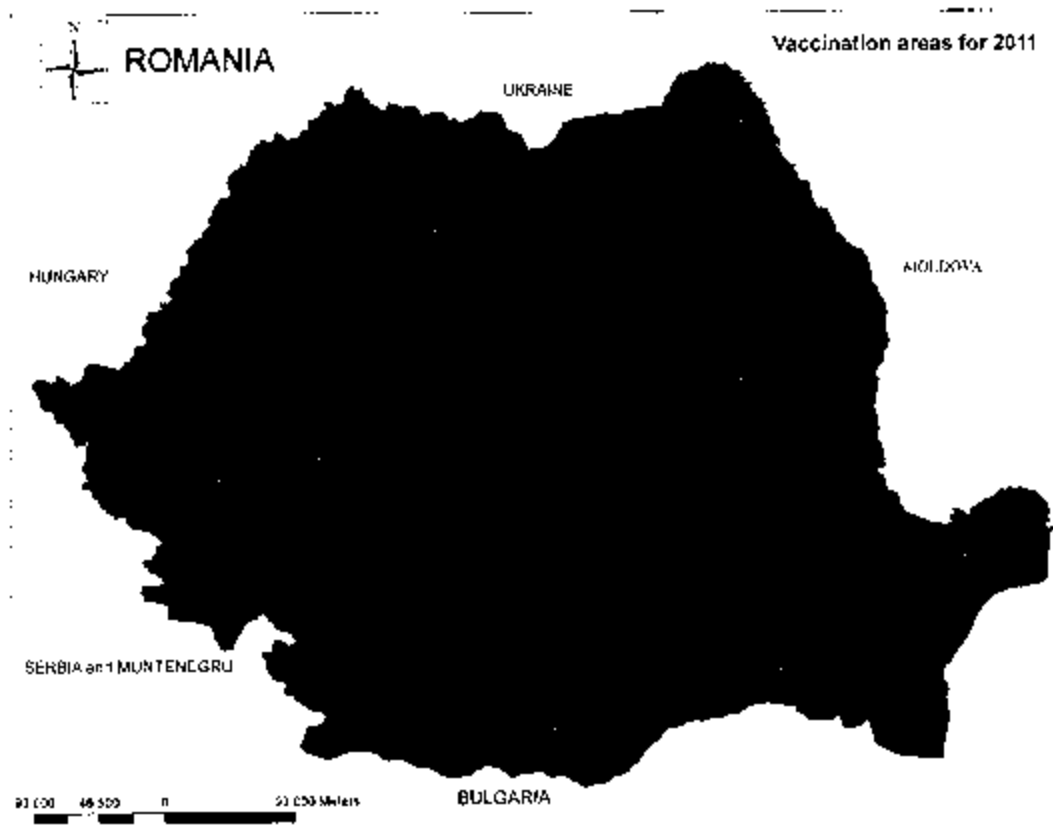


Diagram no. 6

4.4 Description of the measures provided by this program

Rabies prophylaxis under legislative aspects in Romania is regulated by the following Orders and Laws:

- NSVFSA President ORDER 29/2008 for the approval of the sanitary veterinary norm regarding general measures for preventing and control of rabies in domestic and wild animals
- Government Decision nr. 55/2008 for the approval Programme for surveillance, control and eradication rabies in foxes

Accordingly with the above mentioned rules, in Romania, the vaccination and registration of domestic dogs and cats is compulsory.

Emergency vaccination of all domestic animals having contact with infected suspected animals is also compulsory.

4.4.1 Disease notification

Rabies is a notifiable disease from local to central level, in accordance with the NSVFSA President Order no.79/2008.

The obligativity of disease notification comes to the free practice empowered practitioners which notify the official veterinarian about the rabies suspicions in the field. Rabies suspicion is notified from the field to SVFSD, and samples are sent to the county sanitary veterinary laboratory accredited and authorized for diagnosis.

The official vet responsible with animal health from county SVFSD notifies the suspicion by a SMS to director for animal health and welfare from NSVFSA. Following to laboratory confirmation of rabies, the county SVFSD and of the Bucharest City, will notify, using a notification report form, to NSVFSA all confirmed cases of rabies.

If rabies is confirmed in a domestic animal, the owner is also notified and a complete file is issued in view of applying the control measures, if necessary.

The situation concerning rabies cases is notified twice on a year to OIE, and quarterly to the European Institute for Rabies control.

4.4.2. Target animals and animal population - not applied

4.4.3. Identification of animals and registration of holdings - not applied

4.4.4. Qualifications of animals and herds - not applied

4.4.5. Rules on the movement of animals - not applied

4.4.6 Serological and virusological tests used for the detection of rabies and the immune status in foxes before and after vaccination:

The serological and virological tests used are in conformity with the standard manuals for the OIE diagnosis tests.

i) Fluorescent antibody test

The most widely used test for rabies diagnosis is the FAT, which is recommended by both WHO and OIE. This test may be used directly on a smear, and can also be used to confirm the presence of rabies antigen in cell culture or in brain tissue of mice that have been inoculated for diagnosis. The FAT gives reliable results on fresh specimens within a few hours in more than 95-99% of cases. The sensitivity of the FAT depends on the specimen (the degree of autolysis and how

comprehensively the brain is sampled, on the type of lyssavirus and on the proficiency of the diagnostic staff. Sensitivity may be lower in samples from vaccinated animals due to localisation of antigen, which is confined to the brainstem. For direct rabies diagnosis, smears prepared from a composite sample of brain tissue, that includes the brain stem, are fixed in high-grade cold acetone and then stained with a drop of specific conjugate. Anti-rabies fluorescent conjugates may be prepared in the laboratory. Those available commercially are either polyclonal conjugates specific to the entire virus or specific to the rabies nucleocapsid protein, or they may be prepared from a mix of different MAbs. In the FAT, the specific aggregates of nucleocapsid protein are identified by their fluorescence. The specificity and sensitivity of these anti-rabies fluorescent conjugates for locally predominant virus variants should be checked before use.

The FAT may be applied to glycerol-preserved specimens. If the specimen has been preserved in a formalin solution, the FAT may be used only after the specimen has been treated with a proteolytic enzyme. However, the FAT on formalin-fixed and digested samples is always less reliable and more cumbersome than when performed on fresh tissue.

ii) Enzyme-linked immunosorbent assay

Commercial kits are available for indirect ELISA that allow a qualitative detection of rabies antibodies in individual fox samples following vaccination. In accordance with the WHO recommendations, 0.5 IU per ml rabies antibodies is the minimum measurable antibody titre considered to represent a level of immunity that correlates with the ability to protect against rabies infection. The ELISA provides a rapid test that does not require handling of live rabies virus, to determine if vaccinated foxes have sero-converted. Whereas the recommendations regarding the sampling fraction of foxes for the detection of antibodies is not provided in UE normative acts, 3000 animals have been proposed for examination in 2011 year.

iii) Another test:

Tetracycline determination

Tetracycline is a marker of bait uptake and provides a life-long marking of bones and teeth that is easily detected on post-mortem. It is innocuous for both target and non-target species and is very stable when incorporated into baits.

Determination of tetracycline uptake by direct U.V. microscopic examination of sections of bones and teeth provides an easy way of monitoring bait uptake and is especially useful when identifying other causes for vaccination failure.

4.4.7 Vaccines used and vaccination schemes

Live rabies vaccines used for oral vaccination of foxes should fulfill the requirements of the European Pharmacopoeia monographs as well as the efficacy and safety recommendations of the WHO. Vaccine titer at batch release should correspond to at least ten times the dose found to completely protect an experimental group (indicative 100% protective dose). The titre of the final vaccine in the bait should not fall below the indicative 100% protective dose following exposure to 25°C for seven days. Each vaccine batch should be tested and approved for titre and stability by an acknowledged quality control scheme according to OIE standards and WHO recommendations.

Laboratories involved in the monitoring and evaluation of rabies programmes monitor the titer of all batches of rabies virus baits before and during release into the field.

The melting point of the bait casing should be above 40°C to ensure that the capsule of the vaccine is still covered if exposed to such temperatures in the field.

Vaccine producers should provide detailed information to the National Laboratories on the stability of baits to be used in the field.

The Community Reference Laboratory should perform additional tests or trials if required.

The use of tetracycline as a biomarker in the teeth and bones of foxes is recommended to evaluate bait-uptake in target species.

The vaccines against rabies which follow to be used in vaccination campaigns against rabies in foxes are presented as vaccine bites, administered by plane on the most important surface from the area established for vaccination, and manually, in zones where the administration by plane is not possible.

The used vaccines need to be immunogenic, harmless and produced for the main susceptible species at rabies, as well as to be used in most of the vaccination campaigns established during the year, no matter the weather conditions.

The oral vaccination of foxes is made by distributing by plane or by helicopter the vaccine baits (20 baits/km²), on smooth surfaces or in case of area where the access is burdened, and around the localities, is done manually (50 bites/km²), by the managers of the hunting founds, being assisted by the official vets.

In order to be appropriate for use in Romania, the vaccines against rabies need to be authorized for commercialization in our country.

The authorization for commercialization is obtained in accordance with the NSVFSA Order no. 187/2007 regarding The Code of veterinary medical products, published in the Official Jurnal of Romania Part I, No. 804 bis/26.XI.2007 or in accordance with the Regulation 726/2004/EC for establishing the community procedures concerning authorization and surveillance of medicines for humans and for founding of an European Agency for medicines, published in J.O. Nr. L 136, 30.04.2004.

The authorization conditions for vaccine against rabies are:

- To contain live attenuated vaccine strains;
- To be intended for oral immunization of foxes;
- To be able to be distributed by plane/helicopter;
- To have the expire date minimum nine month since delivering.

At delivery, every vaccine series need to be accompanied by the Official Analysis report, in accordance with the request of EDQM (European Directorate for Quality Medicine).

The number of vaccination campaigns, the vaccination scheme and the way in which vaccination is effectively done are described in the 3-rd chapter: "The description of the programe" and 7.3.2. "Data on the vaccination programme in foxes"

Responsible for the vaccination campaigns is General sanitary veterinary directorate, at central level, and county sanitary veterinary directorates, at local level.

4.4.8. Information and assessment on bio-security measures management and infrastructure) in place in the holdings involved- not applied

4.4.9. Measures in case of a positive result

When a rabies cases is confirmed in domestic or wild animals, are applied specific control measures, in accordance with the NSVFSA President Order no. 29/2008.

For these cases is applied the following procedure:

A. Measures applied in case of rabies confirmation in animals from a holding, locality, zone

After rabies confirmation, the county SVFSD acts as follows:

- a) perform the epidemiological enquire ;

- b) establishes the protection and the surveillance zones ;
- c) issues the control plan with deadlines and responsibilities;

The control measures in the protection zone include:

- drawing up the epidemiological maps;
- killing of carnivores which were bitten or scratched by sick animals, if they were not vaccinated against rabies, or if they have less than 21 days since first vaccination,
- isolation by the rest of the animals of the vaccinated carnivores which have been bitten or scratched by the sick animal;
- placement under observation of all animals from that holding for 14 days, beginning with the contact moment ;
- killing of all animals from that holding, in case when they manifest clinical signs in this period of time; animals which did not manifest clinical signs of rabies, are released from observation;
- inspection of the carnivores from the protection zone which have been bitten or scratched by the sick animal are made by the free practice empowered, for 14 days, and, if they don't show clinical signs are released from the observation;
- interdiction of animal movement for animal which were under observation for a period of, at least 3 month.

The control measures in the surveillance zones include:

- a census for all dogs and cats;
- vaccination of dogs and cats with inactivated vaccine;
- surveillance and movement control of dogs and cats.

B. Measures applied in the hunting founds, in case when rabies is confirmed in wild animals

When rabies is confirmed, the county SVFSD and that of Bucharest city take the following measures:

- a) perform the epidemiological enquire ;
- b) establishes and declare the infected area ;
- c) Ask to the managers of the hunting founds to evaluate the wild animal population, especially of the foxes;
- d) released the control measures plan with deadlines and responsibilities;
- e) release and implement a vaccination program for foxes ;
- f) ask for organisation of hunting campaigns for foxes, without usig hunting dogs ;
- g) order the banning of skinning wild animals killed or found dead.

4.4.10. Compensation scheme for owners of slaughtered and killed animals

Rabies is included on the list of the disease for which the government assure the compensation of farmer's losses in case of appliance of the control measures

Compensation for the killing of infected animals and animals which represent sources of contamination and also compensation for animals killed or affected in some other way in the process of killing on the infected premises are covered in Government Decision No. 1214/2009 with subsequent amendments.

This GD is under modifying now, having regard that the compensation of losses for owner will be done in the future by NSVFSA founds, and not from Ministry of the Agriculture, Forestry and Rural Developments founds as so far.

Gov. Dec. 1214/2009 specifies the beneficiaries of the compensation (under art. 4), the method of compensation and the source of the funds for disease control operations and describes the basis for this calculation (covered in art. 4 and Appendix no. 2).

Appendix no. 1 of Gov. Dec. 1214/2009 presents the list of diseases for the eradication of which compensation payments are granted.

The compensation will be paid to the owner, by the market value, for the animals killed on suspicion, following, as well as for animal by-products and materials which have been seized and destroyed.

4.4.11 Control of the implementations of the programme and reporting

The control of implementing the programme is made by the NSVFSA by the Directorate for Checks and Border Inspection Post (BIP) Coordination, in accordance with the provisions of the National Programme for Checks, approved through President order.

At the level of county SVFSD, the control is performed by sanitary veterinary official officers from the service for checks, in collaboration with the official veterinarian from animal health service and sanitary veterinary zonal office who draw up reports concerning the fulfill of the programme. These reports about surveillance shall be sent towards the central veterinary authority and to the Institute for Diagnosis and Animal Health.

5. Benefits of the programme

The effective completion of the programme for control and monitoring of rabies in Romania will reduce the spreading chances of rabies in wild and domestic animal population, eliminating the risk of rabies transmission to humans and allowing our country to grant the free of rabies status.

6. Data on the epidemiological evolution during the last five years

6.1. Evolution of the disease - not applied

6.2. Stratified data on surveillance and laboratory tests- not applied

6.3. Data on infection (one row per year)

Years: 2006 – 2010 (30.06.2010)

Disease: Rabies Animal Species: domestic animals

România ^(b)	Number of herds infected	Number of animals infected
2006	73	73
2007	132	132
2008	161	161
2009	93	115
2010	65	82

Years: 2006 – 2010 (30.06.2010)

Disease: Rabies

Animal Species: wild animals

<u>România^(b)</u>	<u>Number of herds infected</u>	<u>Number of animals infected</u>
2006	Not applied	203
2007	Not applied	322
2008	Not applied	916
2009	Not applied	421
2010(30.06.2010)	Not applied	223

6.4. Data on the status of herds at the end of each year - not applied**6.5. Data on vaccination or treatment programmes - not applied****6.6. Data regarding the number of foxes in Romania****6.6.1. Estimation of fox population: 2009****Estimation method:**

Annually, the State Forestry Services of Romania, by specific methods, estimates the fox population and set up the hunting quota. The counting of foxes is carried out in winter and early spring by the identification of sets, direct observations on certain areas and holdings and blind running.

Hunting of foxes takes place during the whole year, but the main part takes place in the winter.

An: 2009

Nr.	Counties	Hunting grounds(km ²)	Foxes number
1	ALBA	5873	2652
2	ARAD	7431	1976
3	ARGES	6419	1274
4	BACAU	6125	794
5	BIIHOR	7006	1696
6	BISTRITA-NASAUD	4969	1048
7	BRASOV	4491	2026
8	BRAILA	4630	610
9	BOTOSANI	4492	1595
10	BUZAU	5736	1131
11	CARAS-SEVERIN	8274	2043
12	CALARASI	4837	767
13	CLUJ	5994	2761
14	CONSTANTA	6583	450
15	COVASNA	3704	650
16	DAMBOVITA	3686	1124
17	DOLJ	6931	1833

18	GALATI	4183	294
19	GIURGIU	3274	489
20	GORJ	4972	484
21	IARGHITA	5939	1614
22	HUNEDOARA	6764	2140
23	IALOMITA	4244	545
24	IASI	5188	1536
25	ILFOV	1577	271
26	MARAMURES	5857	1405
27	MEHEDINTI	4817	768
28	MURES	6398	3005
29	NEAMT	5359	1409
30	OLT	4920	733
31	PRAHOVA	4112	1159
32	SALAJ	3541	1032
33	SATU-MARE	3978	1556
34	SIBIU	5217	1727
35	SUCEAVA	7862	3142
36	TELEORMAN	5631	875
37	TIMIS	8272	2901
38	TULCEA	5987	788
39	VASLUI	4776	1160
40	VALCEA	5292	894
41	VRANCEA	4543	683
	TOTAL	219.884	55.040

6.6.2. Monitoring of wildlife

Years: 2006 – 2010(31.06) Disease: rabies

Animal Species: foxes

Description of the used serological tests:

1. ELISA test for antibody detection.

Description of the used virological tests:

2. Direct Immunofluorescent

Alte teste

3. Tetracycline detection

All serological and virological tests are performed according to the diagnostic manual of the EU

România	Serological tests (ELISA)		Virological tests (FAT)		Other tests (T.T.C)	
	Number of samples tested	Number of positive samples	Number of samples tested	Number of positive samples	Number of samples tested	Number of positive samples
2006	Not applied	Not applied	829	203	Not applied	Not applied
2007	Not applied	Not applied	823	321	Not applied	Not applied
2008	17	2	964	951	20	3
2009	275	25	1173	404	275	18
2010 (30.06.10)	30	0	736	212	30	0

6.6.3 Data on the vaccination programme in foxes

Year: 2006-2010

Disease: Rabies

Animal Species: foxes

In Romania a complete vaccination by plane distribution of foxes was never done, the only way of vaccination so far being by manually distribution of bites at den.

In the year 2010 the National Authority for Sanitary Veterinary and Food Safety has issued "Public procurement tender documentation of rabies vaccine baits in the form of vaccine and its distribution related services" that was posted in the electronic procurement system.

For the public purchase of antirabies baits and airway distribution, the tender process established one winner for each procedure.

There has been formulated one complaint and presented to the National Council for Solving Complaints; the court of law should pronounced its decision (accept or reject the complaint).

7. Objectives

7.1. Targets related to testing

Region :	Type of test:	Target population:	Type of sample:	objective:	Number of planned tests
41 counties	1. F.A.T	Foxes	brain	Monitoring of rabies virus in the indicator animals	16380
	2. E.L.I.S.A (antibody level)	Foxes	Liquid thoracic and blood serum	Monitoring of postvaccinated antibody	14020
	3. Detection tetracycline test (T.T.C)	Foxes	bones and teeth (mandibula)	Monitoring of the tetracycline marker	14020
Total					16380

7.1. Targets related to testing

7.1.1. Target on diagnostic test:

Disease: Rabies

Animal species: foxes

Number of testes on counties

No.	County	Virological Tests		Serological tests		Others	
		1. F.A.T.		2. E.L.I.S.A (antibody level)		3. U.V (tetracycline marker)	
		Sample no.	Positive cases	Sample no.	Positive cases	Sample no.	Positive cases
1	ALBA	520		450		450	
2	ARAD	510		450		450	
3	ARGES	505		450		450	
4	BACAU	510		450		450	
5	BIHOR	560		500		500	
6	BISTRITA-NASAUD	460		400		400	
7	BOTOSANI	460		400		400	
8	BRAILA	400		350		350	
9	BRASOV	460		400		400	
10	BUZAU	460		400		400	

11	CARAS-SEVERIN	460	400	400
12	CALARASI	360	300	300
13	CLUJ	520	450	450
14	COSTANTA	350	300	300
15	COVASNA	450	400	400
16	DAMBOVITA	255	200	200
17	DOLJ	310	250	250
18	GALATI	345	300	300
19	GIURGIU	250	200	200
20	GORJ	250	200	200
21	HARGHITA	455	400	400
22	HUNEDOARA	515	450	450
23	IALOMITA	290	240	240
24	IASI	360	300	300
25	ILFOV	140	100	100
26	MARAMURES	565	500	500
27	MEHEDINTI	400	350	350
28	MURES	570	500	500
29	NEAMT	360	300	300
30	OLT	250	200	200
31	PRAHOVA	205	150	150
32	SATU-MARE	510	450	450
33	SALAJ	510	450	450
34	SIBIU	515	450	450
35	SUCEAVA	365	300	300
36	TELEORMAN	250	200	200
37	TIMIS	520	450	450
38	TULCEA	280	230	230
39	VASLUI	410	350	350
40	VALCEA	260	200	200
41	VRANCEA	255	200	200
	TOTAL	16380	14020	14020

7.1.2. Targets on testing herds and animals- not applied

7.2. Targets on qualification of herds and animals- not applied

7.3. Targets on vaccination or treatment

7.3.1. Targets on vaccination or treatment - not applied

7.3.2 Data on the vaccination programme in foxes

Year: 2011

Disease: Rabies

Vaccination by aerial distribution

Nr.	Counties	Km ²	Aerial distribution		
			Number of doses (baites)/km ²	Number of doses (baites)/km ²	Number of doses (baites)/km ²
1	ALBA	5873	20	2	220.000
2	ARAD	7431	20	2	300.000
3	ARGES	6419	20	2	260.000
4	BACAU	6125	20	2	250.000
5	BIHOR	7006	20	2	280.000
6	BISTRITA-NASAUD	4969	20	2	200.000
7	BRASOV	4491	20	2	180.000
8	BRAILA	4630	20	2	160.000
9	BOTOSANI	4492	20	2	200.000
10	BUZAU	5736	20	2	240.000
11	CARAS-SEVERIN	8274	20	2	330.000
12	CALARASI	4837	20	2	200.000
13	CLUJ	5994	20	2	240.000
14	CONSTANTA	6583	20	2	250.000
15	COVASNA	3704	20	2	120.000
16	DAMBOVITA	3686	20	2	140.000
17	DOLJ	6931	20	2	280.000
18	GALATI	4183	20	2	160.000
19	GIURGIU	3274	20	2	160.000
20	GORJ	4972	20	2	200.000
21	HARGHITA	5939	20	2	240.000
22	HUNEDOARA	6764	20	2	280.000

23	IALOMITA	4244	20	2	160.000
24	IASI	5188	20	2	200.000
25	ILFOV	1577	20	2	60.000
26	MARAMURES	5857	20	2	240.000
27	MEHEDINTI	4817	20	2	180.000
28	MURES	6398	20	2	280.000
29	NEAMT	5359	20	2	200.000
30	OLT	4920	20	2	200.000
31	PRAHOVA	4112	20	2	160.000
32	SALAJ	3541	20	2	150.000
33	SATU-MARE	3978	20	2	160.000
34	SIBIU	5217	20	2	260.000
35	SUCEAVA	7862	20	2	300.000
36	TELEORMAN	5631	20	2	220.000
37	TIMIS	8272	20	2	320.000
38	TULCEA	5987	20	2	250.000
39	VASLUI	4776	20	2	200.000
40	VALCEA	5292	20	2	180.000
41	VRANCEA	4543	20	2	180.000
	TOTAL	219.884	20	2	8.790.000

Vaccination by manual distribution

No	Counties	Km ²	Manual distribution		
			Number of doses (baites)/km ²	Number of campaigns	Total number of doses (baites) /county
1	ALBA	5873	50	2	6.000
2	ARAD	7431	50	2	6.000
3	ARGES	6419	50	2	7.000
4	BACAU	6125	50	2	5.500
5	BIIOR	7006	50	2	6.000
6	BISTRITA-NASAUD	4969	50	2	5.000
7	BRASOV	4491	50	2	5.600
8	BRAILA	4630	50	2	4.000
9	BOTOSANI	4492	50	2	4.500
10	BUZAU	5736	50	2	4.500
11	CARAS-SEVERIN	8274	50	2	7.000
12	CALARASI	4837	50	2	4.500
13	CLUJ	5994	50	2	6.000
14	CONSTANTA	6583	50	2	5.000
15	COVASNA	3704	50	2	4.200
16	DAMBOVITA	3686	50	2	3.500
17	DOLJ	6931	50	2	5.000
18	GALATI	4183	50	2	3.000
19	GIURGIU	3274	50	2	3.000
20	GORJ	4972	50	2	4.500
21	HARGHITA	5939	50	2	6.000
22	HUNEDOARA	6764	50	2	7.600
23	IALOMITA	4244	50	2	4.000
24	IASI	5188	50	2	5.000

25	ILFOV	1577	50	2	1.500
26	MARAMURES	5857	50	2	6.000
27	MEHEDINTI	4817	50	2	4.000
28	MURES	6398	50	2	8.000
29	NEAMT	5359	50	2	4.500
30	OLT	4920	50	2	4.000
31	PRAHOVA	4112	50	2	4.000
32	SALAJ	3541	50	2	6.000
33	SATU-MARE	3978	50	2	7.000
34	SIBIU	5217	50	2	7.200
35	SUCEAVA	7862	50	2	7.000
36	TELEORMAN	5631	50	2	4.000
37	TIMIS	8272	50	2	6.400
38	TULCEA	5987	50	2	5.000
39	VASLUI	4776	50	2	4.500
40	VALCEA	5292	50	2	4.500
41	VRANCEA	4543	50	2	4.000
	TOTAL	219.884	20	2	210.000

The manually distribution is made around localities (50 momeli/km²), by the rangers of hunting founds, being assisted by the official veterinarian.

8. Detailed assessment of programme's costs:

Costs related to the following measures:	Task books	Number of doses (pieces of bait)/sample	Unitary cost in EURO	Total amount in EURO	Community finances required (yes/no)
1. Tests					
1.1. Cost of analyses	FAT	16380	18	294840	yes
	ELISA	14020	12	168240	yes
	T.T.C	14020	12	168240	yes
1.2. Cost of sampling		16380	6	98280	yes
1.3. Other costs					
2. Vaccination					
2.1. Buying of vaccines		9000000	0.60	5400000	yes
2.2. Distribution costs	manual	210000 doses/50000 km ²	20 euro/km ²	100000	yes
	aerial	8790000 doses/100000 km ²	0.35	3076500	yes
2.3. Administrative costs				100000	
2.4. Control costs				100000	
2.5. Storage costs				50000	
3. Scarification and destruction					
3.1. Compensation of animal				30000	
3.2. Transport costs				50000	
3.3. Distruction expenses				10000	
3.4. Loss in case of slaughtering					
4. Cleaning and disinfection					
5. Remuneration				150000	
6. Disposable materials and special equipments				150000	
7. Other costs				100000	
Total				10.046.100	yes