

RABIES BULLETIN EUROPE

Volume 34 No 4 Quarter 4 2010

Published May 2011

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ISSN 0257-8506

The Rabies Bulletin Europe is also available online: www.who-rabies-bulletin.org.

Acknowledgements

The Rabies Bulletin Europe is supported by the:

World Health Organization, Geneva
World Organisation for Animal Health (OIE), Paris

Gratefully acknowledged is the financial support of the WHO Collaborating Centre by the

Bundesministerium für Gesundheit and by the Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz, Germany

1. Editorial

In this issue, we present the total numbers of rabies cases for the year 2010 as well as the details for the last quarter of 2010. Furthermore, we present numbers of animals tested for rabies.

A map showing the area covered by ORV campaigns in Europe in 2010 is included. Compared to the previous year, The Czech Republic stopped ORV and the Slovak Republic reduced the area, while Serbia and Kosovo started with ORV campaigns. In the next years other countries of the Western Balkan will also start with ORV in the frame of EU funded projects.

In this issue we provide a miscellaneous article by the Polish colleagues on the upsurge of rabies in the Małopolskie voivodship.

The second article is a summary of the Third European workshop for rabies provided by the EU-RL at ANSES, Nancy. As a new tool for the NRLs network the EU-RL website (<http://www.ansespro.fr/eurl-rabies/index.htm>) was introduced.

Conrad Freuling
Thomas Müller

2. SUMMARY OF RABIES CASES IN EUROPE

RABIES CASES

4th QUARTER 2010

01.10.10-31.12.10

Name	Code	Total	Wildlife	Domestic animals	Bats	Human
ALBANIA	ALB	0	0	0	0	0
AUSTRIA	AUT	0	0	0	0	0
BELARUS	BLR	305	207	98	0	0
BELGIUM	BEL	0	0	0	0	0
BOSNIA - HERCEGOVINA	BIH	1	0	1	0	0
BULGARIA	BGR	0	0	0	0	0
CROATIA	HRV	146	127	19	0	0
CYPRUS	CYP	0	0	0	0	0
CZECH REPUBLIC	CZH	0	0	0	0	0
DENMARK	DNK	0	0	0	0	0
ESTONIA	EST	0	0	0	0	0
FINLAND	FIN	0	0	0	0	0
FRANCE	FRA	2	0	0	2	0
GERMANY	DEU	0	0	0	0	0
GREECE	GRC	0	0	0	0	0
HUNGARY	HUN	2	2	0	0	0
ICELAND	ISL	0	0	0	0	0
IRELAND	IRE	0	0	0	0	0
ITALY	ITA	2	2	0	0	0
LATVIA	LVA	1	1	0	0	0
LITHUANIA	LTU	11	11	0	0	0
LUXEMBOURG	LUX	0	0	0	0	0
MACEDONIA	MKD	0	0	0	0	0
MALTA	MLT	0	0	0	0	0
MOLDOVA	MDA	20	5	15	0	0
MONTENEGRO	MNE	7	5	2	0	0
NETHERLANDS	NED	1	0	0	1	0
NORWAY	NOR	0	0	0	0	0
POLAND	POL	107	91	16	0	0
PORTUGAL	PRT	0	0	0	0	0
ROMANIA	ROU	83	58	25	0	0
RUSSIAN FEDERATION	RUS	869	436	431	0	2
SERBIA	SRB	23	21	2	0	0
SLOVAK REPUBLIC	SVK	0	0	0	0	0
SLOVENIA	SVN	0	0	0	0	0
SPAIN	ESP	0	0	0	0	0
SWEDEN	SWE	0	0	0	0	0
SWITZERLAND + LIEC.	CHE	0	0	0	0	0
TURKEY	TUR	53	4	49	0	0
UKRAINE	UKR	519	185	334	0	0
UNITED KINGDOM	UNK	0	0	0	0	0
TOTAL		2152	1155	992	3	2

Wildlife: excluding bats

3. Miscellaneous Articles

3. 1 Rabies outbreak in Małopolskie voivodship in Poland

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On August 12th 2010 a rabid fox attacked and bit a dog on a small farm in the municipality of Bobowa in the southeast of Poland (district Gorlice, voivodship Malopolskie, longitude: E 20°56'53"; latitude: N 49°42'51"; Fig 1). The fox was shot and sent to the regional veterinary laboratory in Krakow for rabies diagnosis. The examination of the brain sample by fluorescent antibody test (FAT) was positive for rabies. In order to confirm the preliminary diagnosis and to characterize the virus isolate, the brain of the rabid fox was sent to the National Reference Laboratory for Rabies located at the

National Veterinary Research Institute in Pulawy. Rabies was confirmed by FAT and hn RT-PCR as well as by real-time RT-PCR. Additionally, differentiation of isolate was done by PCR-RFLP method. Test result showed clearly that the isolated rabies virus was a field virus.

The study confirmed the first positive rabies case in the area after seven years – the last positive case was diagnosed there in 2003. It should be also mentioned that since 1995 oral rabies vaccination (ORV) of foxes has been carried out in this area twice a year in spring and in autumn.

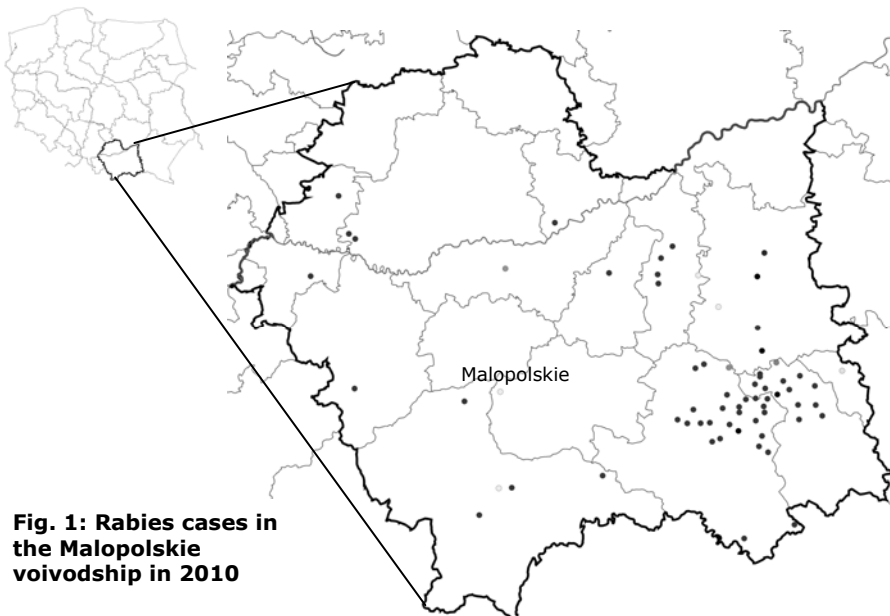


Fig. 1: Rabies cases in the Malopolskie voivodship in 2010

On 30th of August 2010, a dog suspected for rabies was submitted for rabies diagnosis to the regional veterinary diagnostic laboratory and also tested rabies positive. Three weeks before death the dog had been bitten by a laboratory confirmed rabid fox. This first case in a domestic animal occurred in the same municipality, Bobowa, in close proximity to the

first case. Unfortunately, in the following weeks and months further cases of rabies were diagnosed in this area. From the 12th of August 2010 till end of the year 118 rabies cases were identified (Fig. 2) in different species of animals. However, vast majority of cases were recorded in the red fox – 94 in total.

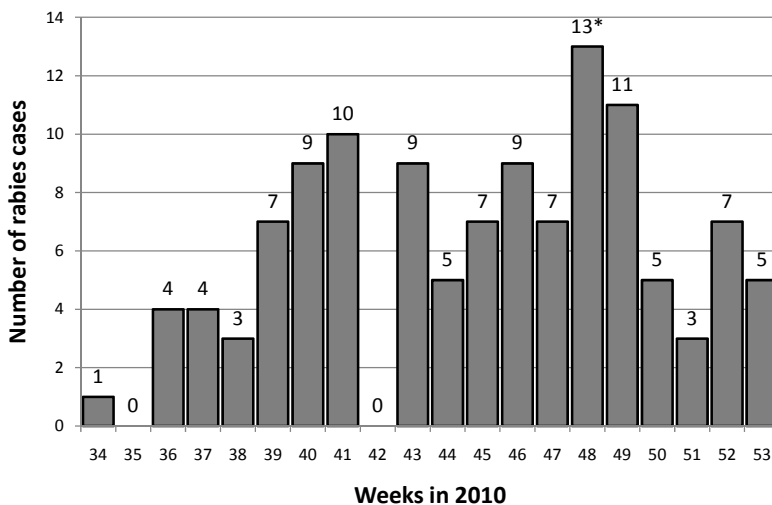


Fig. 2: Dynamics of rabies epizootic in Małopolskie voivodship during 2010

The outbreak involves 13 districts in the Małopolskie voivodship (Fig. 1) with the following number of animals affected: 94 foxes, 6 cats, 6 dogs, 4 cattle, 3 stone martens, 1 badger 2 sheep and 1 horse. Of the 13 districts where rabies has been recorded two of them recorded the highest number of rabies -77% (Tab. 1).

An intensive surveillance and monitoring program was initiated in order to investigate of source of infection in this area that had been rabies free for a long period. As we know the closest foci of rabies were located at

a distance of around 150 km to the East in the Podkarpackie voivodship in the border area with Ukraine. However, this appears too far for a rabid red fox to cover such large distance without leaving any traces of transmission of rabies virus to other animals.

We have also investigated the possible spill over the vaccine strain as a source of the current epidemic. However results of the study using RFLP method and phylogenetic analysis have confirmed that all isolates were classified as field strains of rabies virus (Fig.3). Also, one could speculate that a residual focus of rabies had

persisted in the area at a level below the detection threshold of the current rabies surveillance. However, epidemiological analysis confirmed that the level of surveillance in this province was adequate and therefore such scenario was considered unlikely a source of the current outbreak.

Another possible and very probable source of infection could be illegal import of infected pet animals within the European Union or from the third countries. A preliminary phylogenetic analysis of isolates from the outbreak shows their high similarity with the strains circulating in Romania, Ukraine and Russia (Fig. 2).

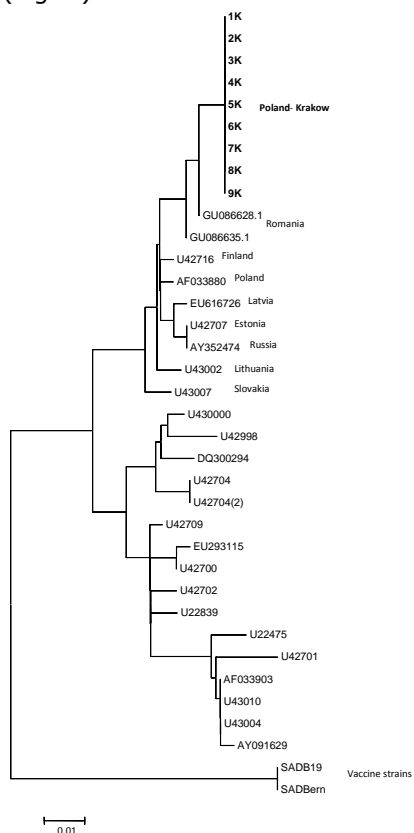


Fig. 3 Phylogenetic tree with isolates from the outbreak area using NJ method based on 560 bp fragment of the N-gene (Mega 4.1 software)

However, additional studies need to be undertaken to confirm this hypothesis.

The results of a preliminary analysis show that the disease is mainly found among young foxes. It seems that a large proportion of young foxes is not enough protected against rabies after the spring ORV campaign. Heavy rains and floods following the vaccine distribution in spring 2010 may have contributed to the reduced availability of vaccine baits for animals and may have resulted in a poor performance of the ORV campaign.

Due to the situation in Małopolska different activities have been implemented to limit the spread of rabies from the outbreaks. First of all, it was decided to perform an additional vaccination campaign on the territory of the outbreak and 50 km around of the outbreak. This vaccination campaign was carried out in late November in order to stop the spread of disease among animals. The campaign was carried out on the area of 5,029 km² with 119,520 doses of vaccine distributed by plane. On the territory of 1,636 km² (most infected area) distances between flight lines were reduced from 1 km to 0.5 km.

It was also recommended to i) additionally vaccinate dogs and possibly cats, ii) to enhance surveillance by paying attention to all animals found dead especially wild and submit them for rabies test, and iii) to determine seroconversion and bait-uptake by also taking blood samples and the mandible bone, respectively, from foxes submitted to testing for rabies.

3. 2 Third European workshop for rabies and implementation of the EU-RL website

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On September 22, 2010 the 3rd rabies workshop took place in Nancy (France) involving 38 National Reference Laboratories' (NRLs) participants from European Union (EU) Member States (MSs) countries. The main objective of the meeting focused on the rabies diagnosis techniques within MSs.

The meeting started with a presentation of the results of the inter-laboratory trial 2010. A total of 24 European NRLs and 18 laboratories from third countries participated to the study. The three techniques concerned were Fluorescent Antibody Test (FAT), Rabies Tissue Culture Infection Test (RTCIT) and the Reverse Transcriptase Polymerase Chain Reaction (RT-PCR). Results revealed that the highest proportion of laboratories with concordant results was found in FAT (85.0%; n= 40 participants), RT-PCR (80.6%; n= 31 participants) followed by RT-CIT (77.3%; n= 22 participants).

The results more than satisfactory showed no error on samples issued from rabies virus (RABV), independently of the technique used. However, it was observed that efforts are still required in the detection of bat strains as false negatives still occurred on such strains (EBLV-1 and ABL-V : 2.5% in FAT, 13.6% in RTCIT, 0% in RT-PCR; EBLV-2: 2.5% in FAT, 4.5% in RTCIT, 0.03% in RT-PCR).

For each technique assessed (FAT, RTCIT, RT-PCR) a slight increase in the proportion of false positive

results was observed compared to the inter-laboratory results of 2009. This could be partly explained by the fact that tests of 2009 were performed by the help of two panels while the tests of 2010 were all performed on a single panel. The multiplicity of manipulations on a same panel could increase the probability of cross-contamination between samples leading to false positive results.

Finally it must be stressed that every laboratory failing in 2009 harbored concordant results in 2010 except one suggesting that participation in inter-laboratory tests can facilitate the laboratory improvement.

The second part of the meeting was focusing on discussion for harmonization of techniques in rabies diagnosis. For FAT and RTCIT, the variations in procedures within Member States were presented. The steps that should not be subject to variation in the procedures were discussed. Thus, for each step of the procedures (fixation, staining, etc...), recommendations have been proposed based on their importance (table 1 for FAT, table 2 for RTCIT). The session on RTCIT harmonization stressed the necessity to undertake successive passages on negative samples and discussion raised on the advantages of using successive dilutions of the inoculums.

Table1: Recommendation of the EU-RL for rabies diagnosis using FAT

Procedure step	Strong recommendation	Recommendation	At laboratory decision
1. Part of the brain	Brainstem and cerebellum or Ammon's horn (two replicates per sample)		
2. Preparation of slides	Impression/ smear method		
3. Drying before fixation		15-30 min at Room Temperature	
4. Fixation	Control and samples slides placed in separate rinse containers	Acetone; -20°C; 30min	
5. Drying before staining		15-30 min at RT	
6. Staining	Strictly follow manufacturers' recommendations		Addition of Evan's blue to conjugate
	37°C; 30 min; humid chamber		
7. Washing	Control and sample slides placed in separate rinse containers	Soaking 2 x 5min in PBS	
8. Mounting	Buffer mounting > or equal to pH 8.5 A strong concentration of glycerol may provide diminished staining		
9. Reading	Read slides within 2 hours	Final magnification from 200 to 400	
	2 independent trained readers		
10. Controls	Include positive and negative controls in each session		

A review of the RT-PCR techniques used in Members States was presented. General recommendations on the laboratory quality assurance, concerned facilities design (PCR laboratory should be divided into at least three physically separate rooms), unidirectional workflow (one way) to reduce the risk of contamination and staff that should be specifically trained and habilitated. Validation of PCR performances need to be

achieved in each NRL for robustness, repeatability, specificity and sensitivity (detection limit) using adequate controls. New perspectives in diagnosis offered by the real time PCR were also discussed. It should be noted that most recommendations were based on existing ones formulated by international organizations (EFSA: Cliquet et al., 2010; WHO: Meslin et al., 1996; OIE, 2008a) and scientific papers (Durham et al., 1986; Pital

and Janowitz, 1963 and Upcott and Markson, 1971: FAT; Rudd and Trimarchi, 1989; Webster, 1987:

RTCIT) and OIE (2008b) for quality standards on molecular biology techniques.

Table 2: Recommendations of the EU-RL for rabies diagnosis using RTCIT

Procedure step	Strong recommendation	Recommendation	At laboratory decision
1. Material	Microplate or Labtek		
2. Cell culture	Cell line: Neuroblastoma		E-MEM; Dulbecco's Modified Eagle Medium (D-MEM); Glasgow Minimum Essential Medium (G-MEM)
	Medium: Eagle's minimal essential medium (EMEM) without essential amino acids + 10% FBS + Antibiotics		
	Trypsination must be performed when cell monolayer at 80% confluence		
3. Inoculum preparation	Preparation at 10%		Frosting/ defrosting step
	Grinding medium: cell culture + antibiotic		
	Centrifugation at low temperature		
4. Inoculation (microplate)	Monolayer 80% confluence		Volume of medium and inoculum
4. Inoculation (Labtek)	Monolayer 80% confluence	50µl of inoculum and 400µl of medium per well (10 ⁵ cell /ml)	
5. Incubation	From 48h to 96h; 36°C ±2; 5% CO ₂		
	Change medium at 72h		
6. Washing	PBS	Soaking 2x	
7. Fixation	100% acetone (Labtek); 80% acetone (microplate)		
8. Drying		15-30 min at Room Temperature	
9. Staining	Follow strictly the manufacturer's recommendations		Use of Evan's blue
	37°C; 30min		
10. Washing	PBS	Soaking 2x for microplate, Soaking 2x 5min for Labtek	
11. Reading	2 independent trained readers	General magnification from 200 to 400	
12. Controls	Include positive and negative controls		

A new tool for the NRLs network has been presented: the EU-RL website (<http://www.ansespro.fr/eurl-rabies/index.htm>). The first website part is intended for a wide audience and provides information about the tasks and interests of the EU-RL in the fight against rabies, the European Commission implication in rabies field and the NRLs network. A second part is dedicated to information provided by the EU-RL for NRLs. Any new request for access should be asked previously to the EU-RL for rabies. This section presents the calendar and important events linked to the EU-RL in the "news, calendar" section. Following this section, the visitor can find then a more detailed presentation of the EU-RL group and presentations of the NRLs in "EU-RL/ NRLs presentation". In this framework each NRL is invited to provide information form on its laboratory and rabies activities. In the third section named "documentation" all documents produced by the EU-RL like workshop report and inter-laboratory reports are available. The fourth section is focused on the technical support offered by the EU-RL for laboratories including the list of trainings and reference reagents. A database on the sequences identified within member states will also be shortly accessible and should be regularly fulfilled. This database will record epidemiological information on the rabies strains from MSs and include the corresponding GenBank accession number of the sequences in order to avoid the duplication of information and not to impose a redundant work to the NRLs. Combination of the data will allow an optimal use of GenBank database which is an

adequate and useful tool for publication, research and analysis of sequences. The EU-RL hopes this tool will become a real exchange platform within MSs NRLs.

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4 DISTRIBUTION OF RABIES IN EUROPE

4.1 Country summaries of rabies cases, 4th quarter 2010

01.10.10-31.12.10

Country		Domestic animals									Wildlife											bat	Human cases	total			
		dog	cat	cattle	equine	goat sheep	pig	stray dog	other	subtotal	fox	raccoon dog	raccoon	wolf	badger	marten	other mustelids	other carnivores	wild boar	roe deer	red deer				fallow deer	other	subtotal
Name	Code																										
Albania	ALB *									0														0			0
Austria	AUT *									0														0			0
Belarus	BLR	31	40	23	4					98	165	38		3									1	207			305
Belgium	BEL *									0														0			0
Bosnia - Hercegovina	BIH			1						1														0			1
Bulgaria	BGR *									0														0			0
Croatia	HRV	9	5			5				19	126								1					127			146
Cyprus	CYP *									0														0			0
Czech Republic	CZH *									0														0			0
Denmark	DNK *									0														0			0
Estonia	EST *									0														0			0
Finland	FIN *									0														0			0
France	FRA									0														0	2		2
Germany	DEU *									0														0			0
Greece	GRC									0														0			0
Hungary	HUN									0	2													2			2
Iceland	ISL *									0														0			0
Ireland	IRE *									0														0			0
Italy	ITA									0				2										2			2
Latvia	LVA									0	1													1			1
Lithuania	LTU									0	6	4			1									11			11
Luxembourg	LUX *									0														0			0
Macedonia	MKD *									0														0			0
Malta	MLT *									0														0			0
Moldova	MDA	5	2	6	2					15	3				1						1			5			20
Montenegro	MNE	1		1						2	3												2	5			7
Norway	NOR *									0														0			0
Poland	POL	4	6	2	1	2		1		16	87			1	2					1			91			107	
Portugal	PRT *									0														0			0
Romania	ROU	11	6	7		1				25	56		1	1									58			83	
Russian Federation	RUS	152	150	114	2	9	1	3		431	348	70		3	1	2	6	1		1			4	436		2	869
Serbia	SRB	1	1							2	20				1									21			23
Slovak Republic	SVK *									0														0			0
Slovenia	SVN *									0														0			0
Spain	ESP *									0														0			0
Sweden	SWE *									0														0			0
Switzerland + Lichtenstein	CHE *									0														0			0
The Netherlands	NED									0														0	1		1
Turkey	TUR	16	4	27	1	1				49	2		1	1									4			5	
Ukraine	UKR	86	144	91	4	9				334	160	11	4		1	7							2	185			519
United Kingdom	UNK *									0														0			0
TOTAL		316	358	272	14	27	1	4	0	992	979	123	5	8	5	15	6	1	1	2	1	0	9	1155	3	2	2152
PER CENT		14,7%	16,6%	12,6%	0,7%	1,3%	0,0%	0,2%	0,0%	46,1%	45,5%	5,7%	0,2%	0,4%	0,2%	0,7%	0,3%	0,0%	0,0%	0,1%	0,0%	0,0%	0,4%	53,7%	0,1%	0,1%	100%

* NO CASES

** NO DATA

4 DISTRIBUTION OF RABIES IN EUROPE

4.2 Country summaries of rabies cases, 2010 total

01.01.10-31.12.10

Country		Domestic animals									Wildlife										bat	Human cases	total				
		dog	cat	cattle	equine	goat sheep	pig	stray dog	other	subtotal	fox	raccoon dog	raccoon	wolf	badger	marten	other mustelids	other carnivores	wild boar	roe deer				red deer	fallow deer	other	subtotal
Name	Code																										
Albania	ALB *								0														0			0	
Austria	AUT *								0																	0	
Belarus	BLR	93	100	58	10				261	544	63		8	2	11							2	630			891	
Belgium	BEL *								0																	0	
Bosnia - Hercegovina	BIH	2		1					3	14			1											15		18	
Bulgaria	BGR	1	3						4	2														2		6	
Croatia	HRV	23	12	4	1	24			64	580			1	1	4				1	1			588		652		
Cyprus	CYP *								0																	0	
Czech Republic	CZH *								0																	0	
Denmark	DNK *								0																	0	
Estonia	EST *								0																	0	
Finland	FIN *								0																	0	
France	FRA								0																	0	
Germany	DEU	1							1																0	6	
Greece	GRC *								0																	6	
Hungary	HUN	1							1	9															9	11	
Iceland	ISL *								0																	0	
Ireland	IRE *								0																	0	
Italy	ITA		9	1	1				11	172				12	1	3				8	1		1	198		209	
Latvia	LVA	2							2	11	1			1											14	16	
Lithuania	LTU	1	1						2	14	13				4					1				31		33	
Luxembourg	LUX *								0																	0	
Macedonia	MKD *								0																	0	
Malta	MLT *								0																	0	
Moldova	MDA	27	11	47	3	2	2		92	28				2	2					1			33		125		
Montenegro	MNE	2		6		1		3	12	55												2	57		69		
Norway	NOR *								0																	0	
Poland	POL	6	8	4	1	2		1	22	117	1			1	3					1				123	6	151	
Portugal	PRT *								0																	0	
Romania	ROU	49	25	30	4	20	3		131	321			7	1	4	4				1	1		338		469		
Russian Federation	RUS	526	423	296	8	69	5	31	4	1362	1192	165		15	3	12	16	7		1		17	1428		2796		
Serbia	SRB	2	4	1					7	93				1	1			2							97	104	
Slovak Republic	SVK *								0																	0	
Slovenia	SVN			1					1	11																12	
Spain	ESP							2	2																	4	
Sweden	SWE *								0																	0	
Switzerland + Lichtenstein	CHE *								0																	0	
The Netherlands	NED								0																	7	
Turkey	TUR	76	7	52	3	14			152	10		1	4												15	167	
Ukraine	UKR	432	466	205	10	27	1		1141	621	29	11	9	8	34							9	721	1	2	1865	
United Kingdom	UNK *								0																	0	
TOTAL		1244	1069	706	41	159	11	34	7	3271	3794	272	12	44	30	73	25	13	1	12	3	0	31	4310	28	8	7617
PER CENT		16.3%	14.0%	9.3%	0.5%	2.1%	0.1%	0.4%	0.1%	42.9%	49.8%	3.6%	0.2%	0.6%	0.4%	1.0%	0.3%	0.2%	0.0%	0.2%	0.0%	0.0%	0.4%	56.6%	0.4%	0.1%	100%

* NO CASES

** NO DATA

4.3 Rabies cases per country and administrative units, 4th quarter 2010

01.10.10-31.12.10

Location	Domestic animals									Wildlife											bat	Human cases	total			
	dog	cat	cattle	equine	goat sheep	pig	stray dog	other	subtotal	fox	raccoon dog	raccoon	wolf	badger	marten	other mustelids	other carnivores	wild boar	roe deer	red deer				fallow deer	other	subtotal
BELARUS																										
Brest	1	1							2	17	3												20			22
Gomel	9	10	8	1					28	27	8		2									1	38			66
Grodno	6	6	2	1					15	31	3												34			49
Minsk	9	9	6						24	29	4												33			57
Mogelev	1	5	4	1					11	37	6		1										44			55
Vitebsk	5	9	3	1					18	24	14												38			56
TOTAL	31	40	23	4	0	0	0	0	98	165	38	0	3	0	0	0	0	0	0	0	0	1	207	0	0	305
PER CENT	10,2%	13,1%	7,5%	1,3%	0,0%	0,0%	0,0%	0,0%	32,1%	54,1%	12,5%	0,0%	1,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,3%	67,9%	0,0%	0,0%	100%
BOSNIA - HERCEGOVINA																										
Sokolac			1						1														0			1
TOTAL	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
PER CENT	0,0%	0,0%	100,0%	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	100%
CROATIA																										
Bjelovarsko - Bilogorska	1								1	4													4			5
Brodsko - Posavska		1							1	1													0			1
Istarska	1								1	21							1						22			23
Karlovacka	1	1							2	5													5			7
Krapinsko - Zagorska									0	10													10			10
Licko - Senjska									0	1													1			1
Pozesko - Slovanska	1								1	10													10			11
Primorsko - Goranska									0	4													4			4
Sibensko - Kninska									0	2													2			2
Sisacko - Moslovska	2	2			5				9	28													28			37
Splitsko - Dalmatinska									0	8													8			8
Varazdinska									0	5													5			5
Viroticko - Podravska									0	2													2			2
Vukovarsko - Srijemska	3								3	8													8			11
Zadarska									0	1													1			1
Zagreb									0	3													3			3
Zagrebacka		1							1	14													14			15
TOTAL	9	5	0	0	5	0	0	0	19	126	0	0	0	0	0	0	1	0	0	0	0	127	0	0	146	
PER CENT	6,2%	3,4%	0,0%	0,0%	3,4%	0,0%	0,0%	0,0%	13,0%	86,3%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,7%	0,0%	0,0%	0,0%	0,0%	87,0%	0,0%	0,0%	100%	

4.3 Rabies cases per country and administrative units, 4th quarter 2010

01.10.10-31.12.10

Location	Domestic animals										Wildlife											bat	Human cases	total			
	dog	cat	cattle	equine	goat sheep	pig	stray dog	other	subtotal	fox	raccoon dog	raccoon	wolf	badger	marten	other mustelids	other carnivores	wild boar	roe deer	red deer	fallow deer				other	subtotal	
FRANCE																											
Bretagne									0															0	1		1
Champagne-Ardenne									0															0	1		1
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
PER CENT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100%
HUNGARY																											
Szabolcs-Szatmar-Bereg									0	2														2		2	
TOTAL	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
PER CENT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100%
ITALY																											
Belluno									0					2										2		2	
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	2
PER CENT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100%
LATVIA																											
Kraslava r.									0	1														1		1	
TOTAL	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
PER CENT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100%
LITHUANIA																											
Kauno									0		1													1		1	
Utenos									0		1				1									2		2	
Vilniaus									0	6	2													8		8	
TOTAL	0	0	0	0	0	0	0	0	0	6	4	0	0	0	1	0	0	0	0	0	0	0	0	11	0	0	11
PER CENT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	54.5%	36.4%	0.0%	0.0%	0.0%	9.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100%

4.3 Rabies cases per country and administrative units, 4th quarter 2010

01.10.10-31.12.10

Location	Domestic animals										Wildlife										bat	Human cases	total			
	dog	cat	cattle	equine	goat sheep	pig	stray dog	other	subtotal	fox	raccoon dog	raccoon	wolf	badger	marten	other mustelidés	other carnivores	wild boar	roe deer	red deer				fallow deer	other	subtotal
MOLDOVA																										
Moldova	5	2	6	2					15	3					1				1				5			20
TOTAL	5	2	6	2	0	0	0	0	15	3	0	0	0	0	1	0	0	0	0	1	0	0	5	0	0	20
PER CENT	25.0%	10.0%	30.0%	10.0%	0.0%	0.0%	0.0%	0.0%	75.0%	15.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%	0.0%	25.0%	0.0%	0.0%	100%
MONTENEGRO																										
Montenegro	1		1						2	3												2	5			7
TOTAL	1	0	1	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	2	5	0	0	7
PER CENT	14.3%	0.0%	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%	28.6%	42.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.6%	71.4%	0.0%	0.0%	100%
POLAND																										
Lubelskie		1						1	1														1			2
Malopolskie	4	4	2	1	2		1		14	75				1	2				1				79			93
Podkarpackie									0	10													10			10
Podlaskie		1						1	1														1			2
TOTAL	4	6	2	1	2	0	1	0	16	87	0	0	0	1	2	0	0	0	1	0	0	0	91	0	0	107
PER CENT	3.7%	5.6%	1.9%	0.9%	1.9%	0.0%	0.9%	0.0%	15.0%	81.3%	0.0%	0.0%	0.0%	0.9%	1.9%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	85.0%	0.0%	0.0%	100%
SERBIA																										
Central Serbia	1							1	17														17			18
Voivodina		1						1	3					1									4			5
TOTAL	1	1	0	0	0	0	0	0	2	20	0	0	0	0	1	0	0	0	0	0	0	0	21	0	0	23
PER CENT	4.3%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.7%	87.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	91.3%	0.0%	0.0%	100%
THE NETHERLANDS																										
Overijssel								0															0	1		1
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
PER CENT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100%

4.3 Rabies cases per country and administrative units, 4th quarter 2010

01.10.10-31.12.10

Location	Domestic animals									Wildlife											bat	Human cases	total				
	dog	cat	cattle	equine	goat sheep	pig	stray dog	other	subtotal	fox	raccoon dog	raccoon	wolf	badger	marten	other mustelids	other carnivores	wild boar	roe deer	red deer				fallow deer	other	subtotal	
ROMANIA																											
Alba		1							1	1														1			2
Arges									0	6														6			6
Bacau	1								1															0			1
Bistrita-Nasaud	1								1	10														10			11
Botosani			1						1															0			1
Braila									0	1														1			1
Buzau									0	1														1			1
Calarasi	3								3															0			3
Caras-Severin	1								1															0			1
Cluj			1						1	4														4			5
Covasna									0	2														2			2
Dambovita	1								1	10														10			11
Doj		1							1															0			1
Galati									0	1														1			1
Gorj									0	4														4			4
Harghita		1	3						4	1					1									2			6
Hunedoara									0	1														1			1
Maramures		1							1															0			1
Neamt			1						1															0			1
Olt									0	1														1			1
Prahova									0	1														1			1
Salaj									0	2														2			2
Satu Mare		1							1	2														2			3
Sibiu			1						1	1														1			2
Suceava									0	2														2			2
Valcea	4								4	4														4			8
Vaslui		1							1															0			1
Vrancea					1				1	1			1											2			3
TOTAL	11	6	7	0	1	0	0	0	25	56	0	0	1	0	1	0	0	0	0	0	0	0	0	58	0	0	83
PER CENT	13.3%	7.2%	8.4%	0.0%	1.2%	0.0%	0.0%	0.0%	30.1%	67.5%	0.0%	0.0%	1.2%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	69.9%	0.0%	0.0%	100%

4.3 Rabies cases per country and administrative units, 4th quarter 2010

01.10.10-31.12.10

Location	Domestic animals									Wildlife											bat	Human cases	total				
	dog	cat	cattle	equine	goat sheep	pig	stray dog	other	subtotal	fox	raccoon dog	raccoon	wolf	badger	marten	other mustelids	other carnivores	wild boar	roe deer	red deer				fallow deer	other	subtotal	
RUSSIAN FEDERATION																											
Astrahanskaja obl.	11	8	1	1	1				22	1	1												2			24	
Belgorodskaja obl.	26	34	3			1			64	22						1							23			87	
Brjanskaja obl.	7	11	4						22	84	19											1	104			126	
Cuvasskaja resp.	1								1	9													9			10	
Dagestan resp.		3	6		1				10	1													1			11	
Ivanovskaja obl.	2								2	2													2			4	
Jaroslavskaja obl.	1								1	2	3												5			6	
Kabardino-Balkanskaja resp.	2		3						5														0			5	
Kaliningradskaja obl.	3	1	2						6	2			1	1								1	5			11	
Kalmykija resp.	2		2						4													1	1			5	
Kaluzskaja obl.	1	5	3						9	13	1					2							16			25	
Karacaevo-Cerkesskaja resp.	3		1						4														0			4	
Krasnodarskij kr.	2	3	2						7		1					1							2			9	
Kurskaja obl.	3	3	2						8	11													11			19	
Lipeckaja obl.	7	6	14	1	1				29	30					1								31			60	
Marij El resp.									0	4													4			4	
Mordovija resp.	1	6							7	17													17			24	
Moskovskaja obl.	5	6							11	19	11												30			41	
Moskva g.		2							2														0		1	3	
Nizegorodskaja obl.	1	1							2	19													19			21	
Orlovskaja obl.	2	2	6						10	5													5			15	
Penzenskaja obl.	11	5	9		3				28	26								1					27			55	
Pskovskaja obl.									0	1	2		1										4			4	
Rjazanskaja obl.	2		4						6	3			1										3			9	
Rostovskaja obl.	4	5	2				1		12	3													3			15	
Saratovskaja obl.	10	7	6						23	14									1				14			37	
Severnaja Osetija-Alanija resp.	1		2				1		4	1													1			5	
Smolenskaja obl.	3	1							4	12	16												28			32	
Stavropol'skij kr.	8	9	21		1				39	4													4			43	
Tambovskaja obl.	1	2	5		1		1		10	8													8			18	
Tul'skaja obl.	10	4	3						17	5				1									6			23	
Tverskaja obl.	4	3	1						8	9	14												23		1	32	
Uljanovskaja obl.	2	1	3						6	5													5			11	
Vladimirska obl.		2							2	6	1					2						1	10			12	
Volgogradskaja obl.	5	5	5						15	4			1										6			21	
Voronezskaja obl.	11	15	4		1				31	6	1												7			38	
TOTAL	152	150	114	2	9	1	3	0	431	348	70	0	3	1	2	6	1	0	1	0	0	0	4	436	0	2	869
PER CENT	17,5%	17,3%	13,1%	0,2%	1,0%	0,1%	0,3%	0,0%	49,6%	40,0%	8,1%	0,0%	0,3%	0,1%	0,2%	0,7%	0,1%	0,0%	0,1%	0,0%	0,0%	0,0%	0,5%	50,2%	0,0%	0,2%	100%

4.3 Rabies cases per country and administrative units, 4th quarter 2010

01.10.10-31.12.10

Location	Domestic animals									Wildlife											bat	Human cases	total			
	dog	cat	cattle	equine	goat sheep	pig	stray dog	other	subtotal	fox	raccoon dog	raccoon	wolf	badger	marten	other mustelids	other carnivores	wild boar	roe deer	red deer				fallow deer	other	subtotal
UKRAINE																										
Avtonomnaya Respublika Krym	1								1	1													1			2
Bolynskaja o.	1								1	2													2			3
Cherkasskaja o.	4	12	4						20	4	2												6			26
Chernigovskaja o.	6	5	8	1					20	10	4			2									16			36
Chernovitskaja o.		2	1						3														0			3
Dnepropetrovskaja o.	10	13	11						34	11													11			45
Donetskaja o.	4	9	5						18	13													13			31
Ivano-Frankovskaja o.	1								1														0			1
Khar'kovskaja o.	5	19	5						29	1	3										2		6			35
Khersonskaja o.	4	9	2						15	9		3											12			27
Khmel'nijskaja o.	3	13	8						24	13				1									14			38
Kirovogradskaja o.	16	5	9		2				32	27				2									29			61
Kiyevskaja o.		3							3														0			3
Luganskaja o.	1	1	4						6	3	1												4			10
L'vovskaja o.	1	2							3	1													1			4
Nikolajevskaja o.	1	5							6	3	1												4			10
Odesskaja o.	2	1	4	1					8	6				1									7			15
Poltavskaja o.		8	5		1				14														0			14
Rovenskaja o.		1							1	2													2			3
Sumskaja o.	7	14	10		1				32	2		1											3			35
Ternopol'skaja o.	1	3	1						5	3													3			8
Vinnitskaja o.	5	8	5		2				20	31													31			51
Zakarpatskaja o.	1								1														0			1
Zaporozhskaja o.	8	6	2		3				19	10													10			29
Zhitomirskaja o.	4	5	7	2					18	8				1	1								10			28
TOTAL	86	144	91	4	9	0	0	0	334	160	11	4	0	1	7	0	0	0	0	0	0	2	185	0	0	519
PER CENT	16,6%	27,7%	17,5%	0,8%	1,7%	0,0%	0,0%	0,0%	64,4%	30,8%	2,1%	0,8%	0,0%	0,2%	1,3%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,4%	35,6%	0,0%	0,0%	100%

4.3 Rabies cases per country and administrative units, 4th quarter 2010

01.10.10-31.12.10

Location	Domestic animals									Wildlife													bat	Human cases	total		
	dog	cat	cattle	equine	goat sheep	pig	stray dog	other	subtotal	fox	raccoon dog	raccoon	wolf	badger	marten	other mustelids	other carnivores	wild boar	roe deer	red deer	fallow deer	other				subtotal	
TURKEY																											
Afyon			1						1															0			1
Antalya		1							1															0			1
Artvin	2								2															0			2
Aydin			3						3															0			3
Balikesir	2		3		1				6					1										1			7
Bayburt	1								1															0			1
Bilecik			3						3															0			3
Bingol	1								1															0			1
Burdur	2								2															0			2
Diyarbakir	1		1	1					3															0			3
Elazig	1								1															0			1
Erzincan			2						2				1											1			3
Erzurum	1		2						3															0			3
Hatay	1		1						2															0			2
Isparta			1						1															0			1
Istanbul	1								1															0			1
Izmir		1	3						4	1														1			5
Kars		1							1															0			1
Konya		1							1															0			1
Kulahya	1		1						2															0			2
Manisa	1								1	1														1			2
Mardin	1								1															0			1
Sakarya	1								1															0			1
Sanliurfa	4								4															0			4
Van	1								1															0			1
TOTAL	22	4	21	1	1	0	0	0	49	2	0	0	1	1	0	0	0	0	0	0	0	0	4	0	0	53	
PER CENT	41,5%	7,5%	39,6%	1,9%	1,9%	0,0%	0,0%	0,0%	92,5%	3,8%	0,0%	0,0%	1,9%	1,9%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	7,5%	0,0%	0,0%	100%	

4.4 Summary of animals tested for rabies in Europe (total 2010)

ANIMAL TESTED

01.01.10-31.12.10

Name	Code	Total	Wildlife	Domestic animals	Bats	Remarks
ALBANIA	ALB	84	46	1	37	
AUSTRIA	AUT*	2613	2429	118	66	
BELARUS	BLR	0				
BELGIUM	BEL*	603	115	430	58	
BOSNIA - HERCEGOVINA	BIH	29	11	18	0	
BULGARIA	BGR	279	255	24	0	
CROATIA	HRV	5219	4110	1028	81	
CYPRUS	CYP*	0				
CZECH REPUBLIC	CZH*	6665	6183	466	16	
DENMARK	DNK*	11	0	3	8	
ESTONIA	EST	239	152	85	2	
FINLAND	FIN*	490	437	45	8	
FRANCE	FRA*	1516	73	1268	175	
GERMANY	DEU*	14827	14248	497	82	
GREECE	GRC*	20	0	20	0	
HUNGARY	HUN	6075	5441	622	12	
ICELAND	ISL*	0				
IRELAND	IRE*	0				
ITALY	ITA	9517	8205	1306	6	
LATVIA	LVA	488	372	116	0	
LITHUANIA	LTU	1126	856	270	0	
LUXEMBOURG	LUX*	31	30	1	0	
MACEDONIA	MKD	0				
MALTA	MLT*	0				
MOLDOVA	MDA	53	6	47	0	
MONTENEGRO	MNE	50	50	0	0	
NETHERLANDS	NED*	109	10	13	86	
NORWAY	NOR*	0				
POLAND	POL	26558	24775	1728	55	
PORTUGAL	PRT*	0				
ROMANIA	ROU	0				
RUSSIAN FEDERATION	RUS	0				
SERBIA	SRB	346	157	189	0	
SLOVAK REPUBLIC	SVK	3299	2956	339	4	
SLOVENIA	SVN	1726	1431	74	221	
SPAIN	ESP*	81	18	48	15	
SWEDEN	SWE*	0				
SWITZERLAND + LIEC.	CHE*	63	38	18	7	
TURKEY	TUR	637	12	624	1	
UKRAINE	UKR	9170	6231	2919	20	
UNITED KINGDOM	UNK*	731	10	33	688	
TOTAL		92655	78657	12350	1648	

Wildlife: excluding bats

* rabies free

4.5 Trend tables

4.5.1 Comparison of the reporting quarter (IV/2010) with the previous quarter (III/2010)

NAME	Total			Wildlife			Domestic animals			Bats			Human		
	IV 2010 (no.)	III 2010 (no.)	Difference	IV 2010 (no.)	III 2010 (no.)	Difference	IV 2010 (no.)	III 2010 (no.)	Difference	IV 2010 (no.)	III 2010 (no.)	Difference	IV 2010 (no.)	III 2010 (no.)	Difference
Albania															
Austria															
Belarus	305	209	96	207	154	53	98	55	43						
Belgium															
Bosnia - Hercegovina	1	3	-2		3	-3	1		1						
Bulgaria		1	-1					1	-1						
Croatia	146	149	-3	127	137	-10	19	12	7						
Cyprus															
Czech Republic															
Denmark															
Estonia															
Finland															
France	2	4	-2							2	4	-2			
Germany		3	-3								3	-3			
Greece															
Hungary	2		2	2		2									
Iceland															
Ireland															
Italy	2	7	-5	2	5	-3		2	-2						
Latvia	1	2	-1	1	2	-1									
Lithuania	11	6	5	11	6	5									
Luxembourg															
Macedonia															
Malta															
Moldova	20	37	-17	5	5		15	32	-17						
Montenegro	7	14	-7	5	13	-8	2	1	1						
Norway															
Poland	107	33	74	91	22	69	16	5	11		6	-6			
Portugal															
Romania	83	85	-2	58	56	2	25	29	-4						
Russian Federation	869	513	356	436	302	134	431	210	221				2	1	1
Serbia	23	17	6	21	16	5	2	1	1						
Slovak Republic															
Slovenia		2	-2		2	-2									
Spain		3	-3					1	-1		2	-2			
Sweden															
Switzerland + Lichtenstein															
The Netherlands	1	3	-2							1	3	-2			
Turkey	53	*		4	*		49	*			*			*	
Ukraine	519	304	215	185	116	69	334	185	149		1	-1		2	-2
United Kingdom															
TOTAL	2152	1395	704	1155	839	312	992	534	409	3	19	-16	2	3	-1

Wildlife: excluding bats

IV/2010 (no.), III/2010 (no.): number of cases

Difference: no. of cases in IV/2010 minus cases in III/2010

* no data

4.5.2 Comparison of the reporting quarter (IV/2010) with the same quarter of the previous year (IV/2009)

NAME	Total			Wildlife			Domestic animals			Bats			Human		
	IV 2010 (no.)	IV 2009 (no.)	Difference	IV 2010 (no.)	IV 2009 (no.)	Difference	IV 2010 (no.)	IV 2009 (no.)	Difference	IV 2010 (no.)	IV 2009 (no.)	Difference	IV 2010 (no.)	IV 2009 (no.)	Difference
Albania		1	-1					1	-1						
Austria															
Belarus	305	246	59	207	163	44	98	83	15						
Belgium															
Bosnia - Hercegovina	1	1					1	1							
Bulgaria		7	-7		7	-7									
Croatia	146	205	-59	127	183	-56	19	22	-3						
Cyprus															
Czech Republic															
Denmark															
Estonia															
Finland															
France	2	2								2	2				
Germany		2	-2								2	-2			
Greece															
Hungary	2	1	1	2	1	1									
Iceland															
Ireland															
Italy	2	47	-45	2	44	-42		3	-3						
Latvia	1	14	-13	1	13	-12		1	-1						
Lithuania	11	15	-4	11	11			4	-4						
Luxembourg															
Macedonia															
Malta															
Moldova	20	27	-7	5	8	-3	15	19	-4						
Montenegro	7	13	-6	5	10	-5	2	3	-1						
Norway															
Poland	107		107	91		91	16		16						
Portugal															
Romania	83	144	-61	58	119	-61	25	25							
Russian Federation	869	836	33	436	395	41	431	435	-4				2	6	-4
Serbia	23	44	-21	21	34	-13	2	10	-8						
Slovak Republic															
Slovenia		12	-12		12	-12									
Spain															
Sweden															
Switzerland + Lichtenstein															
The Netherlands	1		1							1		1			
Turkey	53	*		4	*		49	*			*			*	
Ukraine	519	660	-141	185	288	-103	334	372	-38						
United Kingdom															
TOTAL	2152	2277	-178	1155	1288	-137	992	979	-36	3	4	-1	2	6	-4

Wildlife: excluding bats

IV/2010 (no.), IV/2009 (no.): number of cases

Difference: no. of cases in IV/2010 minus cases in IV/2009

* no data

4.5.3 Comparison of the reporting year (2010) with the previous year (2009)

NAME	Total				Wildlife				Domestic animals				EBLV			Human		
	No. 2010	No. 2009	Difference	in %	No. 2010	No. 2009	Difference	in %	No. 2010	No. 2009	Difference	in %	No. 2010	No. 2009	Difference	No. 2010	No. 2009	Difference
ALBANIA										1	-1							
AUSTRIA																		
BELARUS	891	913	-22	97,6	630	620	10	101,6	261	293	-32	89,1						
BELGIUM	0	0	0								0							
BOSNIA A HERCEGOV	18	25	-7	72,0	15	15	0	100,0	3	10	-7	30,0						
BULGARIA	6	58	-52	10,3	2	48	-46	4,2	4	10	-6	40,0						
CROATIA	652	784	-132	83,2	588	718	-130	81,9	64	66	-2	97,0						
CYPRUS																		
CZECH REPUBLIC																		
DENMARK	0	1	-1										1	-1				
ESTONIA	0	3	-3			3	-3											
FINLAND													1					
FRANCE	6	14	-8	42,9						1			6	13	-7			
GERMANY	6	5	1	120,0					1				5	5	0			
GREECE																		
HUNGARY	11	3	8	366,7	9	2	7	450,0	1	0	1		1	1	0			
ICELAND																		
IRELAND																		
ITALY	209	68	141		198	64	134		11	4								
LATVIA	16	69	-53	23,2	14	58	-44	24,1	2	11	-9	18,2						
LITHUANIA	33	63	-30	52,4	31	49	-18	63,3	2	14	-12	14,3						
LUXEMBOURG																		
MACEDONIA																		
MALTA																		
MOLDOVA	125	60	65		33	23	10		92	37								
MONTENEGRO	69	49	20	140,8	57	42	15		12	7								
NORWAY																		
POLAND	151	8	143	1887,5	123	6	117	2050,0	22		22		6	2	4			
PORTUGAL																		
ROMANIA	469	516	-47	90,9	338	408	-70	82,8	131	107	24	122,4	1					
RUSSIAN FEDERATION	2796	2490	306	112,3	1428	1345	83	106,2	1362	1134	228	120,1	1	-1	6	10	-4	
SERBIA	104	181	-77	57,5	97	141	-44		7	40								
SLOVAK REPUBLIC																		
SLOVENIA	12	34	-22	35,3	11	33	-22	33,3	1	1								
SPAIN	4	4	0	100,0					2	3	-1		2	1	1			
SWEDEN																		
SWITZERLAND/LIECHTEN.																		
THE NETHERLANDS	7	11	-4	63,6									7	11	-4			
TURKEY	167	64	103	260,9	15	2	13	750,0	152	62	90	245,2						
UKRAINE	1865	1281	584	145,6	721	537	184	134,3	1141	744	397	153,4	1		1	2		2
UNITED KINGDOM	0	2	-2	0,0										1	-1		1	
TOTAL	7617	6708	909	113,6	4310	4114	196	104,8	3271	2545	726	128,5	28	38	-10	8	11	-3

Wildlife: excluding bats

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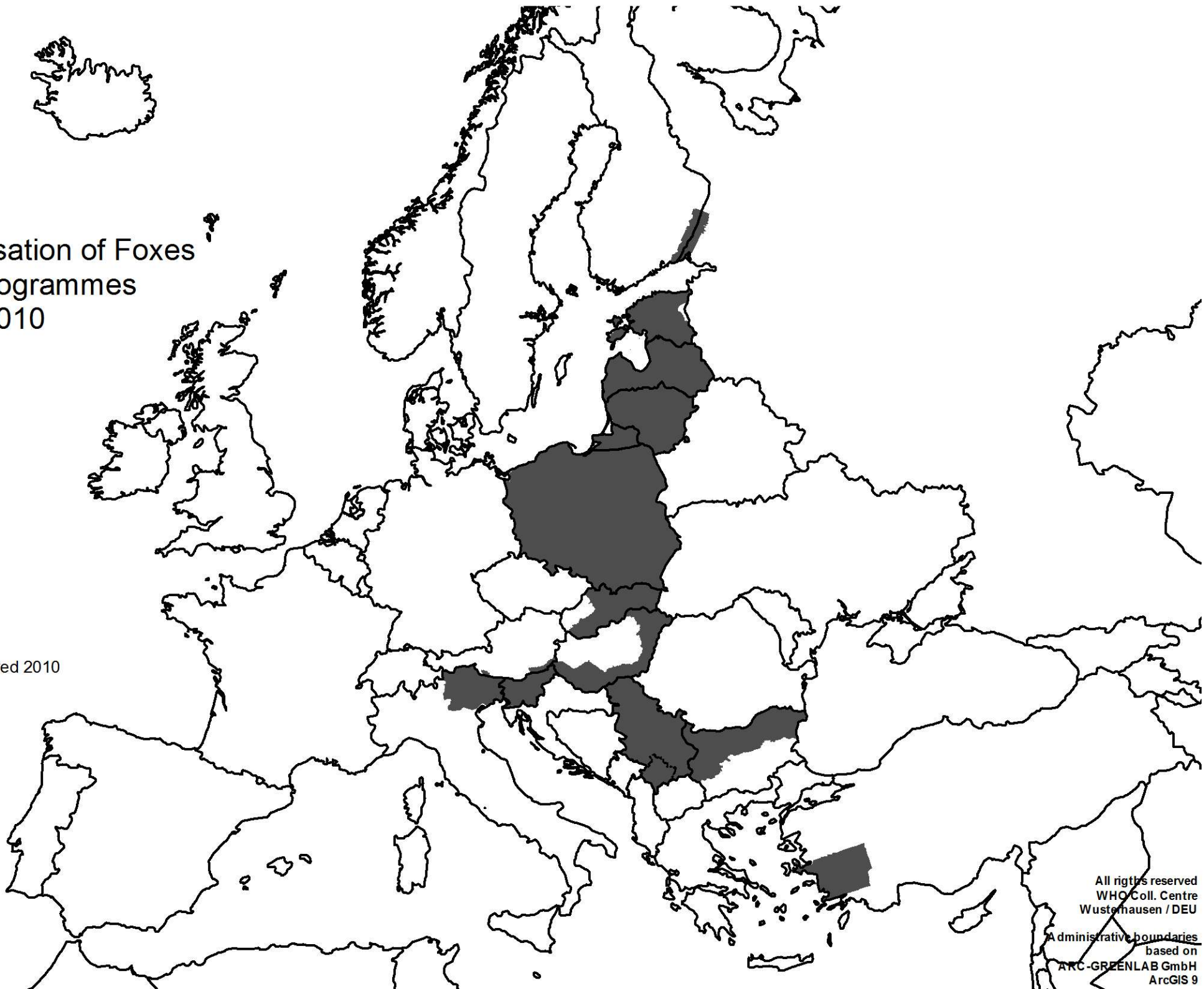
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of contact details!

Oral Immunisation of Foxes (OIF) Programmes 2010

■ total area covered 2010




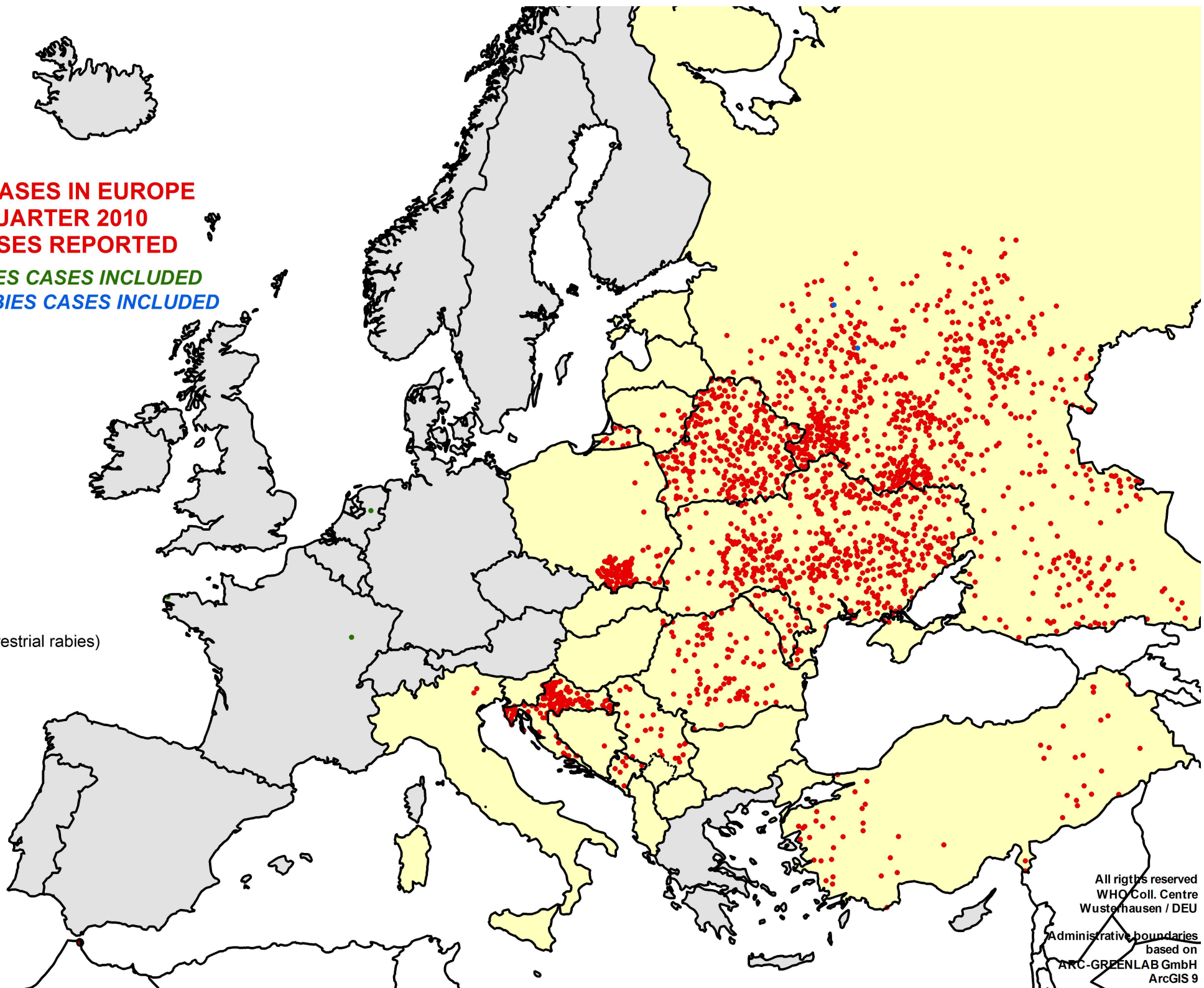
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RABIES CASES IN EUROPE
4th QUARTER 2010
2152 CASES REPORTED

3 BAT RABIES CASES INCLUDED
2 HUMAN RABIES CASES INCLUDED

 rabies free (terrestrial rabies)



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