

**RESULTS OF THE IMPLEMENTATION OF
THE RABIES CO-FINANCED
ERADICATION PROGRAMME 2009
&
RABIES SITUATION IN MAŁOPOLSKIE
REGION IN 2010**



**General Veterinary Inspectorate
Polish Veterinary Inspection**

Presentation Overview

Part I RESULTS OF THE IMPLEMENTATION OF THE RABIES CO-FINANCED ERADICATION PROGRAMME 2009

Part II RABIES SITUATION IN MAŁOPOLSKIE REGION IN 2010



Presentation Overview

Part I RESULTS OF THE IMPLEMENTATION OF THE RABIES CO-FINANCED ERADICATION PROGRAMME 2009

1. Historical data on rabies occurrence and eradication programme (1993-2010)
2. Implementation of the rabies co-financed eradication programme
3. Results



Rabies in Poland – Historical Data

Historical background

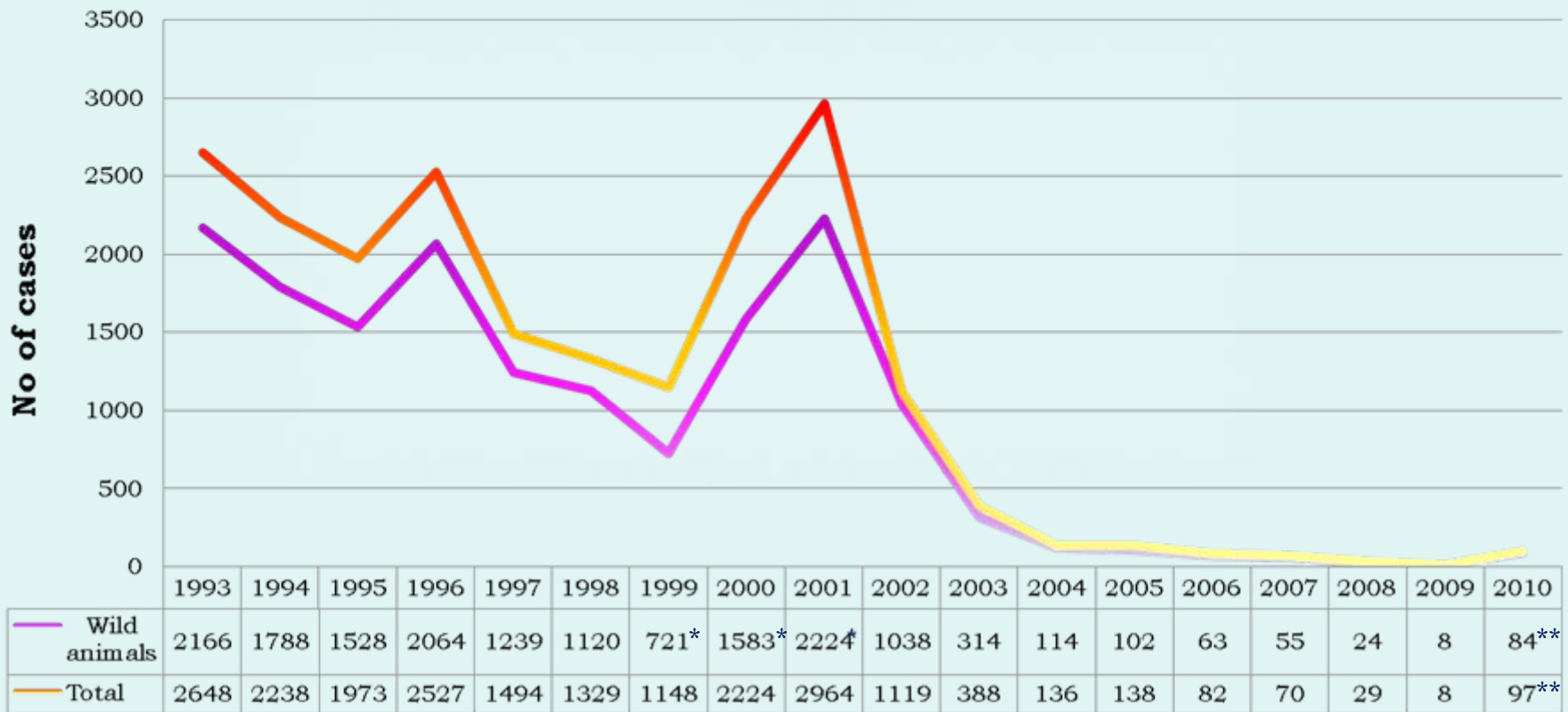
- In late 1940s rabies cases had been occurring mainly in dogs. Obligatory vaccination of dogs had lead to stabilisation of the situation in early 1950s.
- Cases of rabies have started to occur with increased frequency in wild animals in the late 1950s.
- The programme of eradication of rabies in the territory of Poland has been developed in 1991-1992 and implemented in 1993 in 6 of 49 regions.
- Gradually, subsequent regions and eventually in 2002 the whole territory of Poland have been covered by the programme.



Rabies in Poland – Historical Data

No of cases

Rabies cases in Poland in 1993-2010



* - only wild foxes are indicated

** - preliminary data collected until 22.11.2010



Rabies eradication in 2009

Legal basis

EU legal basis:

- Commission Decision 2008/897/EC
- Commission Decision 2008/425/EC
- Commission Decision 2008/940/EC

Domestic legal basis:

- Regulation of the Council of Ministers of 21 April 2009 *on the introduction of eradication and control programmes for bovine tuberculosis and enzootic bovine leucosis, programme of eradication of bovine spongiform encephalopathy and **rabies**, and the survey programme for avian influenza in poultry and wild birds;*
- The Act of 11 March 2004 *on the protection of animal health and control of animal infectious diseases;*
- Regulation of the Ministry of Agriculture and Rural Development of 2 June 2004 *on detailed rules and manner of conducting preventive vaccinations of wild foxes against rabies;*
- Regulation of the Minister of Agriculture and Rural Development of January 7, 2005 *on the eradication of rabies.*



Rabies eradication in 2009

Measures foreseen within the programme

- Oral vaccination of wild foxes;
- Monitoring of vaccination;
- Other measures implemented in outbreaks and surveillance zones.



Rabies eradication in 2009

Vaccination

- *Per os* vaccine placed in the bait;
- Number of vaccine baits depends on:
 - ✓ forestation level;
 - ✓ lay of the land;
 - ✓ wildlife population;
 - ✓ distribution method;
- Number of baits distributed - **not less than 20 baits per 1 km²**



Rabies eradication in 2009

Vaccination

- 2 campaigns:
 - I. spring (April - July) and,
 - II. autumn (September – October)
- Territory covered by the vaccination: 283 202,56 km² – whole territory of Poland = 16 regions;
- Vaccination performed under the responsibility of the respective regional veterinary officers;
- 20 – 30 baits per 1 km² (22 baits per 1 km² in the part of lubelskie voivodship [autumn campaign]; 30 baits per 1 km² in the part of podlaskie and warmińsko-mazurskie voivodship; 27 baits per 1 km² in świętokrzyskie voivodship)
- **11 628 806** doses of vaccine distributed in 2009 (plus additional 52 760 baits received free of charge)
- vaccines used for foxes' immunization:
 - FUCHSORAL (SAD B19) and
 - LYSVULPEN (SAD Bern)



Rabies eradication in 2009

Vaccination

- The vaccine was distributed either from the planes or manually, during 2 vaccination campaigns;
- Plane distribution has been performed in forest areas and wild foxes habitats (planes are equipped with GPS);
- Flight distances – 1 km, except for parts of 3 voivodships (podlaskie, warmińsko-mazurskie and wielkopolskie) where flight distances were 0,5 km;
- Manual distribution has been performed in borders of municipal agglomerations, dumping grounds, parks in cities, or cementaries (in 6 regions: lubelskie, lubuskie, małopolskie, podkarpackie, podlaskie, śląskie)



Rabies eradication in 2009

Monitoring of 2009 vaccination

<u>TARGET</u> 8 foxes to be shot per 100 km ² of foxes' habitats covered by vaccination (in total - 21 393)	<u>RESULTS</u> Foxes shot – 22 689
<u>TESTS</u> Uptake of vaccine (TC) Seroconversion (RFFIT)	<u>RESULTS</u> Number of tests performed – 22 096 Uptake level: 89,12% number of tests performed – 16 805 Seroconversion level: 81,72%



Rabies eradication in 2009

Other laboratory tests performed (foxes)

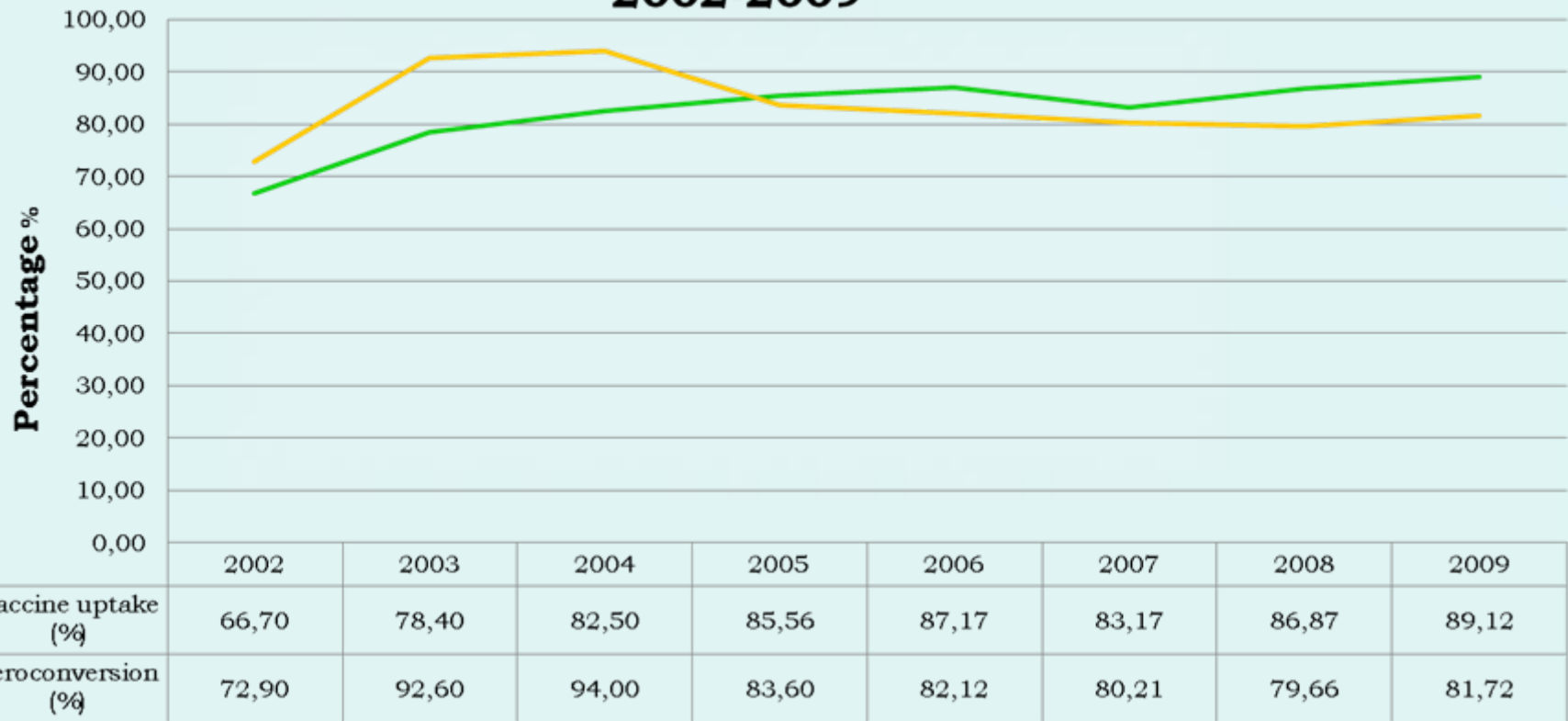
- Immunofluorescence of the brain imprints
- Virus isolation
- Differentiation of rabies virus strains
- Tests for the quality of vaccine



Rabies eradication in 2009

Results of vaccination

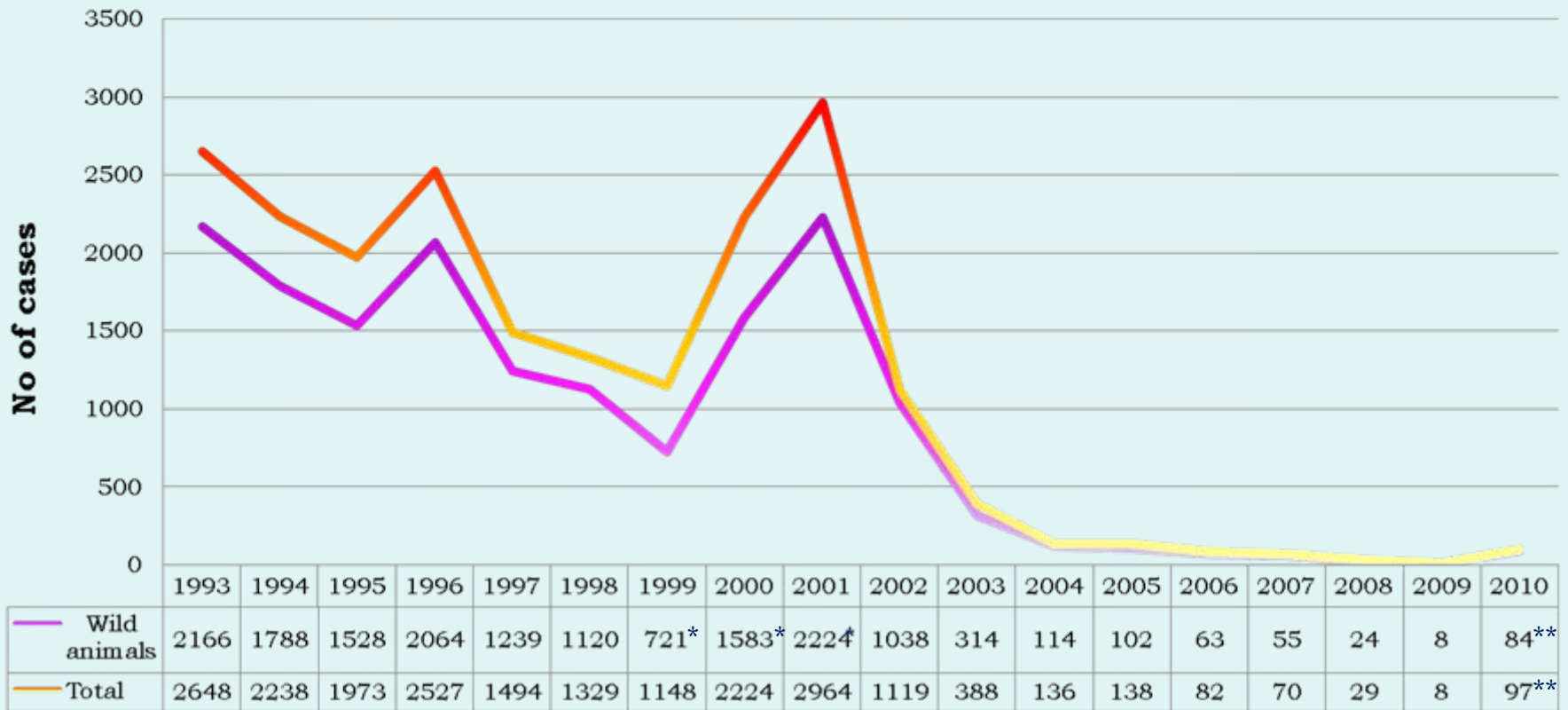
Vaccine uptake and seroconversion levels in foxes in 2002-2009



Rabies eradication in 2009

No of cases

Rabies cases in Poland in 1993-2010



* - only wild foxes are indicated

** - preliminary data collected until 22.11.2010



Rabies eradication in 2009

Cases of Rabies – Details

Rabies cases in 2009				
Region		Domestic animals	Wildlife	
			fox	bat
02	dolnośląskie	none		
04	kujawsko-pomorskie			
06	lubelskie		3	1
08	lubuskie			
10	łódzkie			
12	małopolskie			
14	mazowieckie			1
16	opolskie			
18	podkarpackie		2	
20	podlaskie		1	
22	pomorskie			
24	śląskie			
26	świętokrzyskie			
28	warmińsko-mazurskie			
30	wielkopolskie			
32	zachodniopomorskie			
Total		0	6	2

Total cases in domestic animals

0

Total cases in wildlife

8

8

Overall total



Rabies eradication in 2009

Co-financing

Eligible costs:

- Cost of vaccine doses and baits;
- Cost of vaccine distribution;
- Differentiation of rabies virus strains;
- Tests for the quality of vaccine.

Co-financing received (Commission Decision 2008/897/EC):

- Maximum amount of the Union's financial contribution:
4 450 000 €
- Final amount of the Union's financial contribution:
4 450 000 €



QUESTIONS...



Presentation overview

Part II RABIES SITUATION IN MAŁOPOLSKIE REGION IN 2010

1. Situation in Małopolskie Region (1 August – 22 November 2010)
2. Actions taken in connection with the situation
3. Analysis of the situation
4. Conclusions

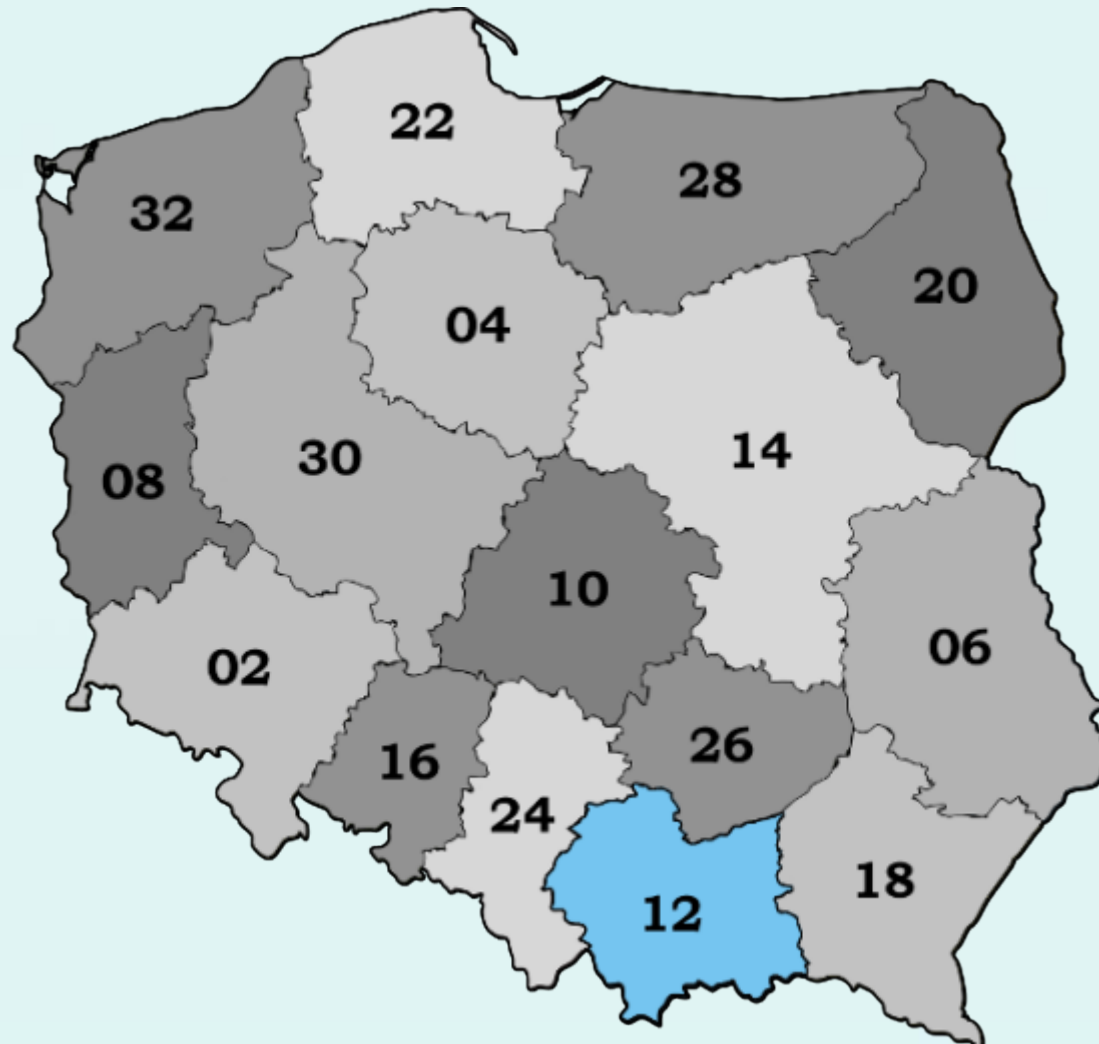


Administrative division of Poland

Regions (Voivodships)

16 administrative regions

16 veterinary regions



- 02 Dolnośląskie
- 04 Kujawsko – pomorskie
- 06 Lubelskie
- 08 Lubuskie
- 10 łódzkie
- 12 Małopolskie / Lesser Poland**
- 14 Mazowieckie
- 16 Opolskie
- 18 Podkarpackie
- 20 Podlaskie
- 22 Pomorskie
- 24 Śląskie
- 26 Świętokrzyskie
- 28 Warmińsko – mazurskie
- 30 Wielkopolskie
- 32 Zachodniopomorskie



Rabies in Małopolskie Region

First case of Rabies – Details



The first rabies case in Małopolskie region since 2003 occurred on 19 August 2010

Species: Fox
District: Gorlice
Municipality: Bobowa
Village: Bobowa
Longitude: E 20°56'53"
Latitude: N 49°42'51"

75 cases in total had been notified until 22 November 2010



Rabies in Małopolskie Region

Cases of Rabies – Details

Rabies cases - week/species									
Week	Period	Species							Total
		Fox	Dog	Cat	Cattle	Horse	Marten	Badger	
1	16-22.8	1							1
2	23-29.8								
3	30.8-5.9	2	1	1					4
4	6.9-12.9	4							4
5	13.9-19.9				2		1		3
6	20.9-26.9	6		1					7
7	27.9-3.10	7	2						9
8	4.10-10.10	10							10
9	11.10-17.10								
10	18.10-24.10	8					1		9
11	25.10-31.10	4			1				5
12	1.11-7.11*	7							7
13	8.11-14.11*	7			1	1			9
14	15.11-21.11*	4	1				1	1	7
Total		60	4	2	4	1	3	1	75

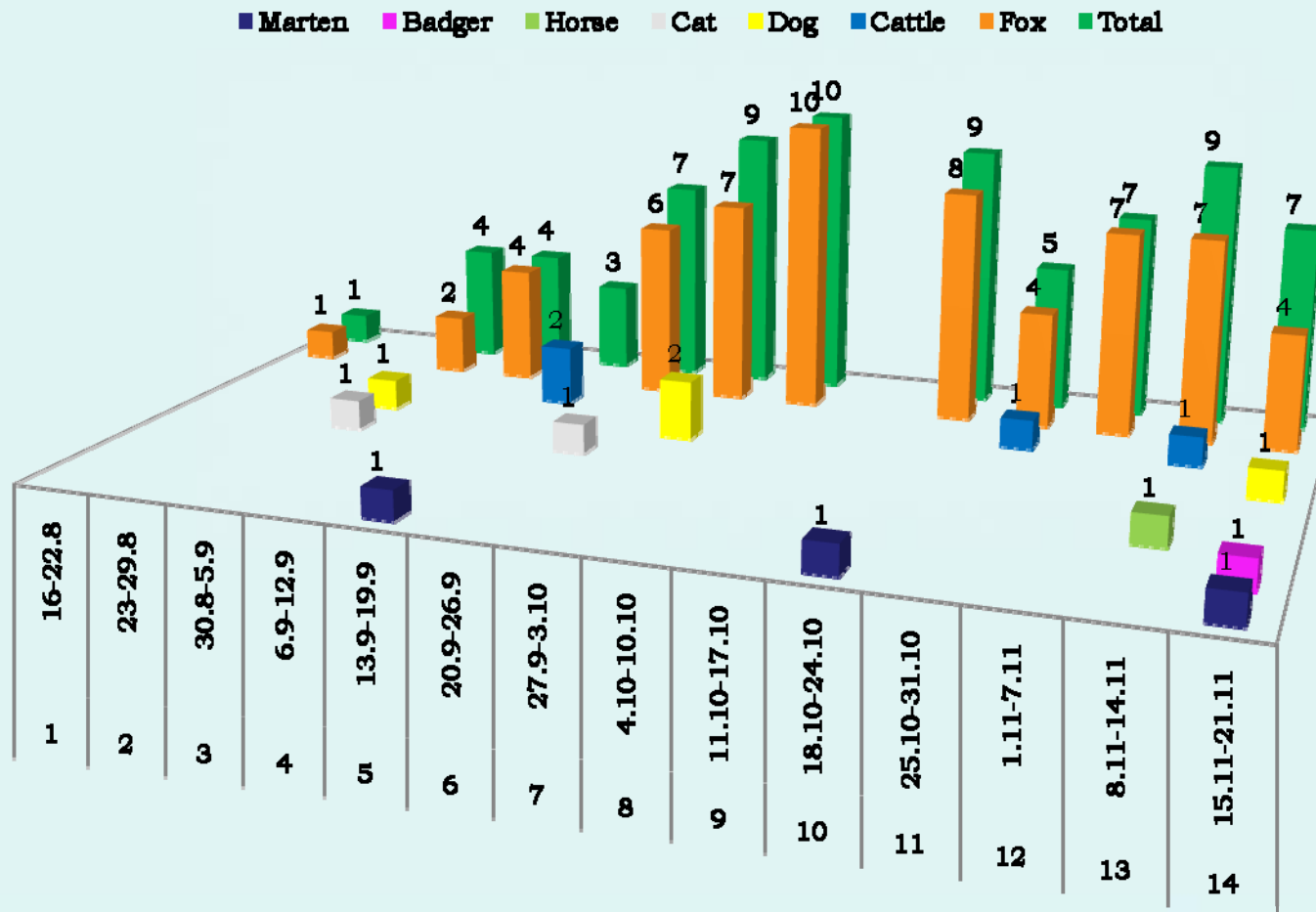
* Results for November 2010 are preliminary



Rabies in Małopolskie Region

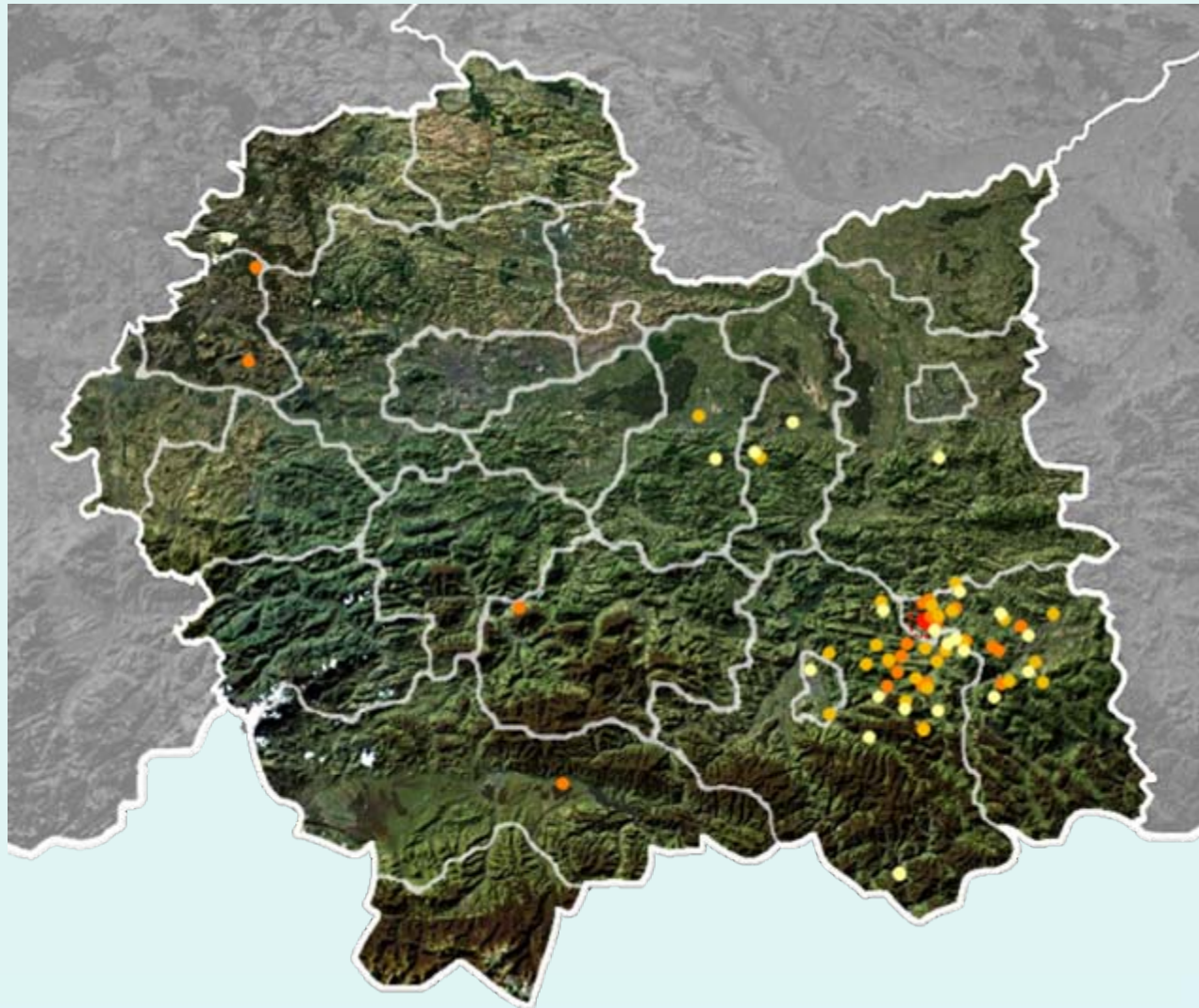
Cases of Rabies – Details

Rabies cases - week/species



Rabies in Małopolskie Region

Cases of Rabies – Geographical distribution



August



September



October



November



Rabies in Małopolskie Region

General observations concerning rabies cases that occurred in Małopolskie Region

- Disease confirmed mostly in cases based on suspicion (clinical signs);
- Only few cases confirmed in monitoring animals;
- Rabies occurred mostly in young foxes (in 59 cases in foxes younger than 18 months; a single fox was older than 18 months);
- Rabies virus strains differentiation test is positive for field strain.



Rabies in Małopolskie Region

Implemented measures

- 12 surveillance zones established (until 22 November);
- Information/awareness campaign conducted;
- Preventive vaccination of cats recommended;
- Killing of animals, which had contact with diseased animals - when appropriate;
- Emergency vaccination of domestic animals in outbreaks - when appropriate;
- Additional vaccine air drop carried out as an extension of the autumn campaign on the territory of 8 districts or parts thereof (average no of baits per km² – 24).



Rabies in Małopolskie Region

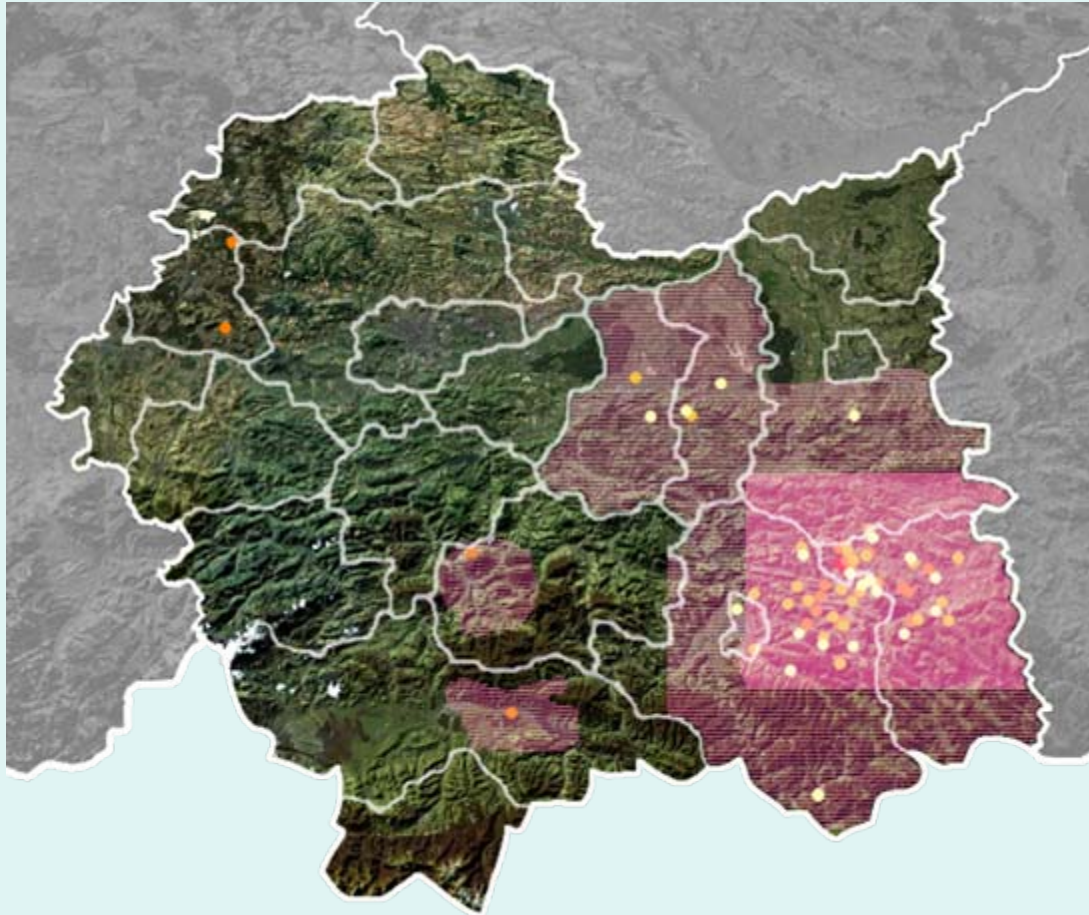
Additional vaccination

- Duration of additional vaccine air drop: 21 – 24 November 2010
- Area covered by vaccination: 5 029 km² of 8 districts
- Number of vaccine baits distributed: 119 520
- Name of vaccine distributed: LYSVULPEN
- Average number of baits distributed per km² : 24
- Flight lines distances: 1 km (within area of 3393 km²) and 0.5 km (within area of 1636 km²)



Rabies in Małopolskie Region

Additional vaccination



 Flight lines
distances: 1 km

 Flight lines
distances: 0,5 km



Rabies in Małopolskie Region

Vaccination campaigns in 2010

Campaigns of wild fox vaccination against rabies in the Małopolskie Region in spring and autumn 2010

Duration of the campaign	Area covered by the vaccination (km ²)	Name of the vaccine	Total amount of vaccine baits distributed
Spring: 07 - 13 May	15 183	Lysvulpen	303 660
Autumn: 13 - 18 September	15 183	Lysvulpen	303 660
Additional: 21-24 November (extension of autumn campaign)	5 029	Lysvulpen	119 520



Rabies in Małopolskie Region

Vaccination - results

Results of the monitoring of fox vaccination campaigns in the territory of Małopolskie Region in 2007-2009

Year	Number of samples tested for TC	(+)	Vaccine uptake (%)	Number of samples tested for seroconversion (RFFIT)	(+)	Seroconversion (%)
2007	1239	1043	84,18%	1208	940	77,81%
2008	1222	1099	89,93%	1171	971	82,92%
2009	1243	1115	89,70%	1203	1014	84,29%



Rabies in Małopolskie Region

Vaccination - results

Results of the monitoring of fox vaccination campaigns in the Małopolskie Region in 2010

Period	Number of samples tested for TC	(+)	Vaccine uptake (%)	Number of samples tested for seroconversion (RFFIT)	(+)	Seroconversion (%)
1 January - 15 June	877	795	90,65%	832	739	88,82%
16 June - 20 October	137	121	88,32%	120	104	86,67%



Rabies in Małopolskie Region

Analysis

- Density of foxes investigated -> 0.8 fox/km²
- Virus titre of oral vaccine examined -> no irregularities in the 2010 spring and autumn vaccination campaign;
- Analysis of aircrafts flight lines carried out -> no irregularities in the 2010 spring and autumn vaccination campaign;
- Results of vaccine uptake and seroconversion in monitoring foxes from 2010 examined;
- Preventive vaccination of dogs checked;
- Weather conditions analysed-> **There was a severe flood just after the 2010 spring campaign.**



Conclusions

- Origin of virus: unknown;
- Disease to be caused by field strain of virus;
- Results of preliminary phylogenetic analysis -> strain similar to viruses circulating in Ukraine, Russia and Romania;
- Flood, which took place in May on the area of Małopolskie Region, probably could influence the immunization of foxes;
- Number of foxes derived from hunters until 31 October in the framework of rabies monitoring – on a proper level (85% of annual plan).



Conclusions

Steps to take

- Continue of the eradication and monitoring of the disease;
- Further analysis of epizootic situation.



THANK YOU FOR YOUR ATTENTION

