RESULTS OF THE IMPLEMENTATION OF THE RABIES CO-FINANCED ERADICATION PROGRAMME 2010

General Veterinary Inspectorate
Polish Veterinary Inspection

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Presentation Overwiew

RESULTS OF THE IMPLEMENTATION OF THE RABIES CO-FINANCED ERADICATION PROGRAMME 2010

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 eradication in 2010

Legal basis

EU legal basis:

•Commission Decision 2009/883/EC;
•Commission Decision 2010/732/EU;
•Commission Decision 2008/425/EC;
•Commission Decision 2008/940/EC.

Domestic legal basis:

•Regulation of the Council of Ministers of 6 April 2010 *on the introduction of eradication and control programmes for 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 2010

Measures foreseen within the programme

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

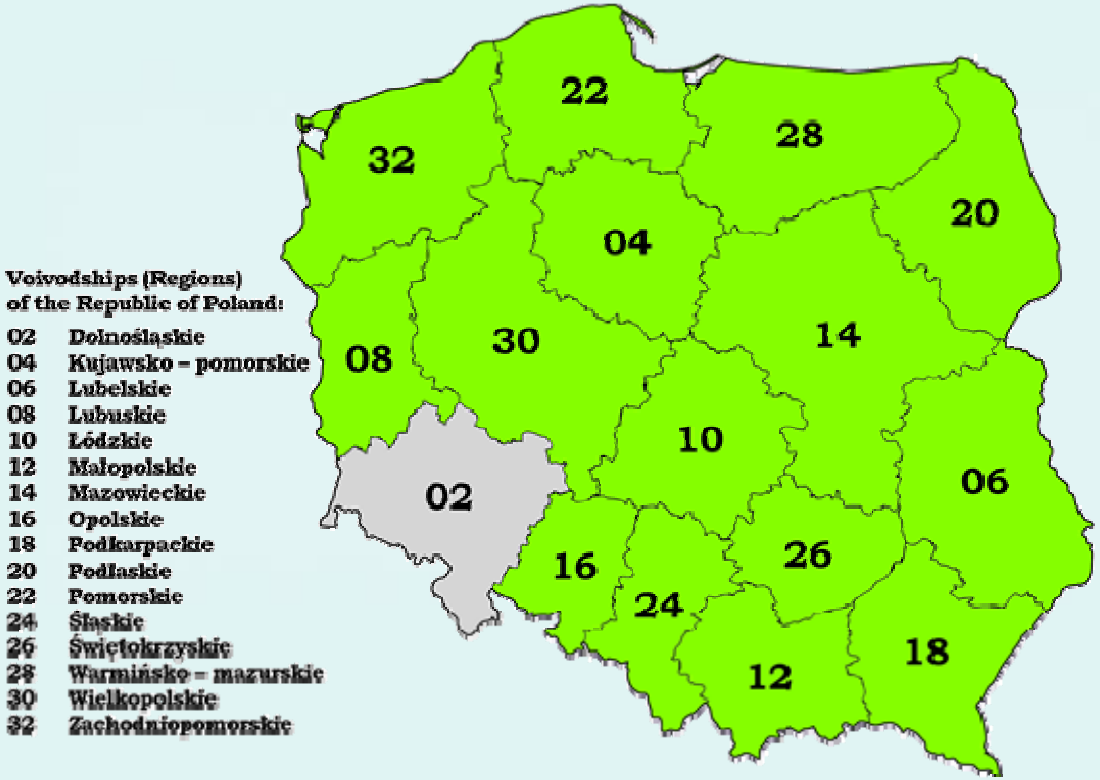
Rabies eradication in 2010

Vaccination

- *Per os* vaccine placed in the bait;
- Number of vaccine baits depends on:
  - ✓ forestration level;
  - ✓ lay of the land;
  - ✓ wildlife population;
  - ✓ distribution method;
- Number of baits distributed - **not less than 20 baits per 1 km^2**

Rabies eradication in 2010

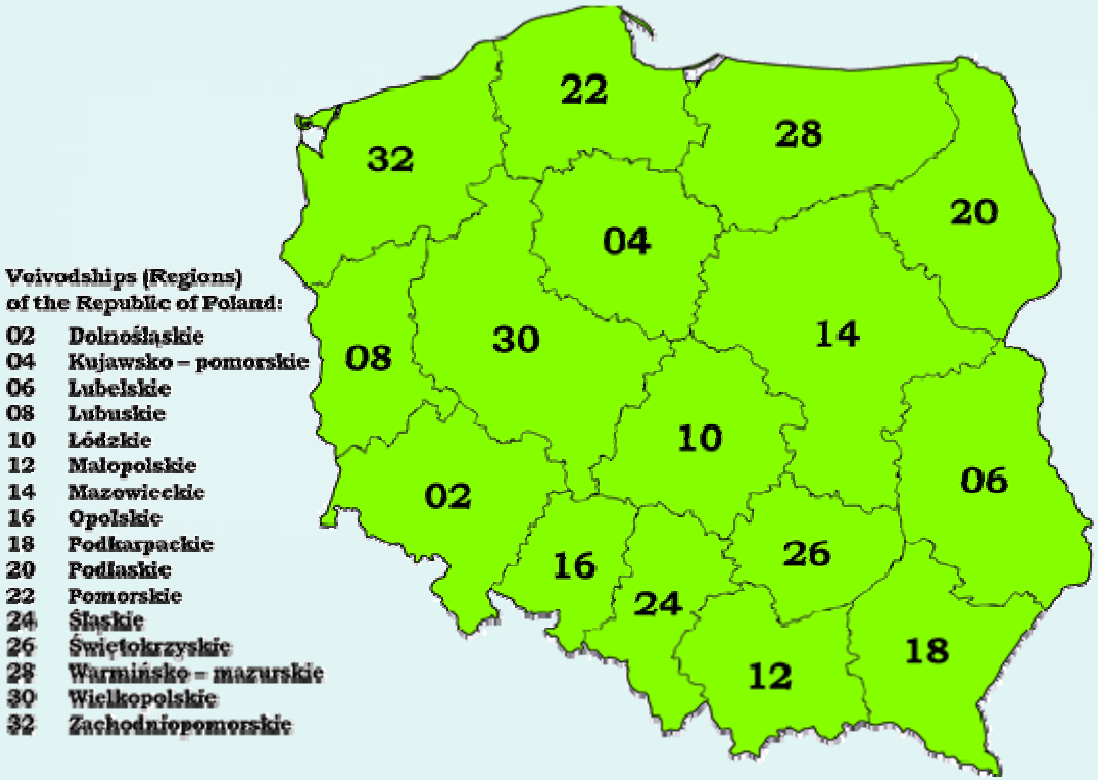
Vaccination ⇨ vaccinated areas in the spring campaign (May)



Only dolnośląskie region (02) was not covered in the spring campaign.

Rabies eradication in 2010

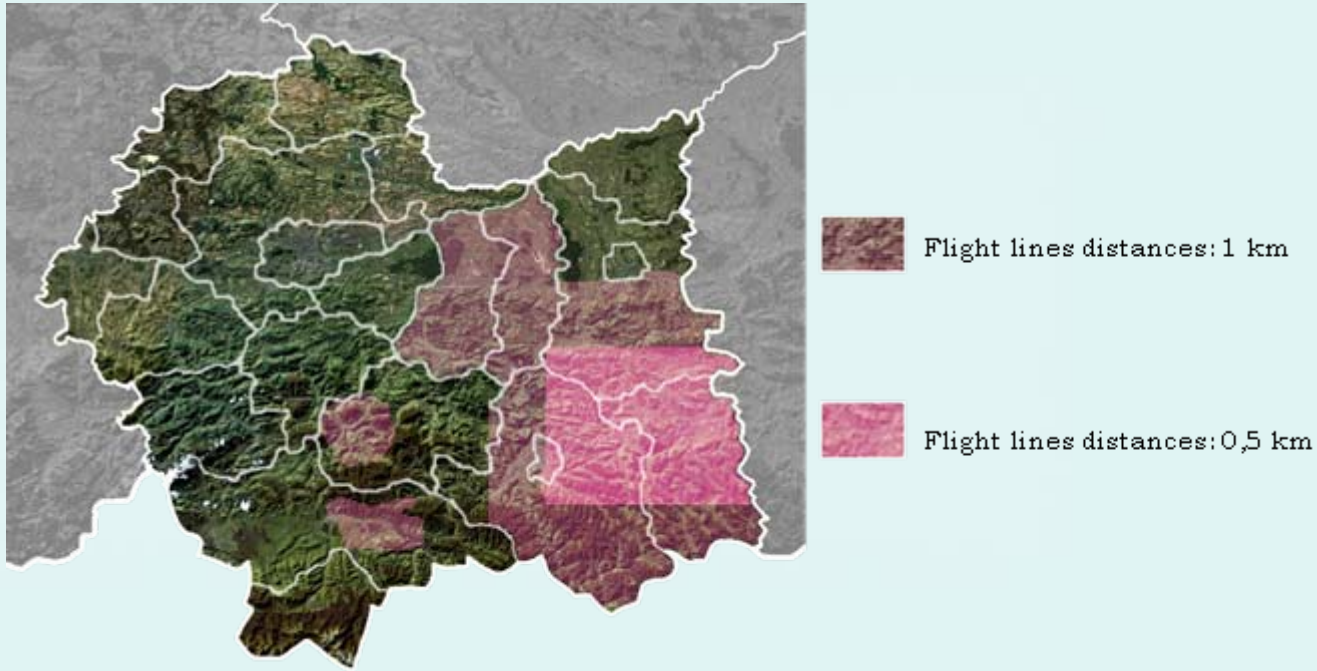
Vaccination ⇨ vaccinated areas in the autumn campaign (September-October)



Autumn campaign covered all regions (280 813,56 km2).

Rabies eradication in 2010

Vaccination ⇨ vaccinated areas in the additional air drop of vaccine in małopolskie region (November)



The additional drop of vaccine was perfomed as an extension of the autumn campaign in response to the epizootic situation in małopolskie region.

Rabies eradication in 2010

Vaccination

- Vaccination performed under the responsibility of the respective regional veterinary officers;
- 20 – 30 baits per 1 km^2 (30 baits per 1 km^2 in the part of podlaskie and warmińsko-mazurskie region; 27 baits per 1 km^2 in the whole świętokrzyskie region; approximately 24 baits per 1 km^2 in małopolskie region during the additional drop of vaccine in November)
- **11 335 116** doses of vaccine distributed in 2010 (including additional 1 510 baits received free of charge)
- vaccines used for foxes' immmunization:
  - FUCHSORAL (SAD B19) and
  - LYSVULPEN (SAD Bern)

Rabies eradication in 2010

Vaccination

- The vaccine was distributed either from the planes or manually;
- Plane distribution has been performed in forest areas and wild foxes habitats (planes are equiped with GPS);
- Flight distances – 1 km, except for parts of 4 voivodships (podlaskie, warmińsko-mazurskie, małopolskie 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 cemeteries (in 5 regions: lubelskie, lubuskie, małopolskie, podkarpackie, śląskie)

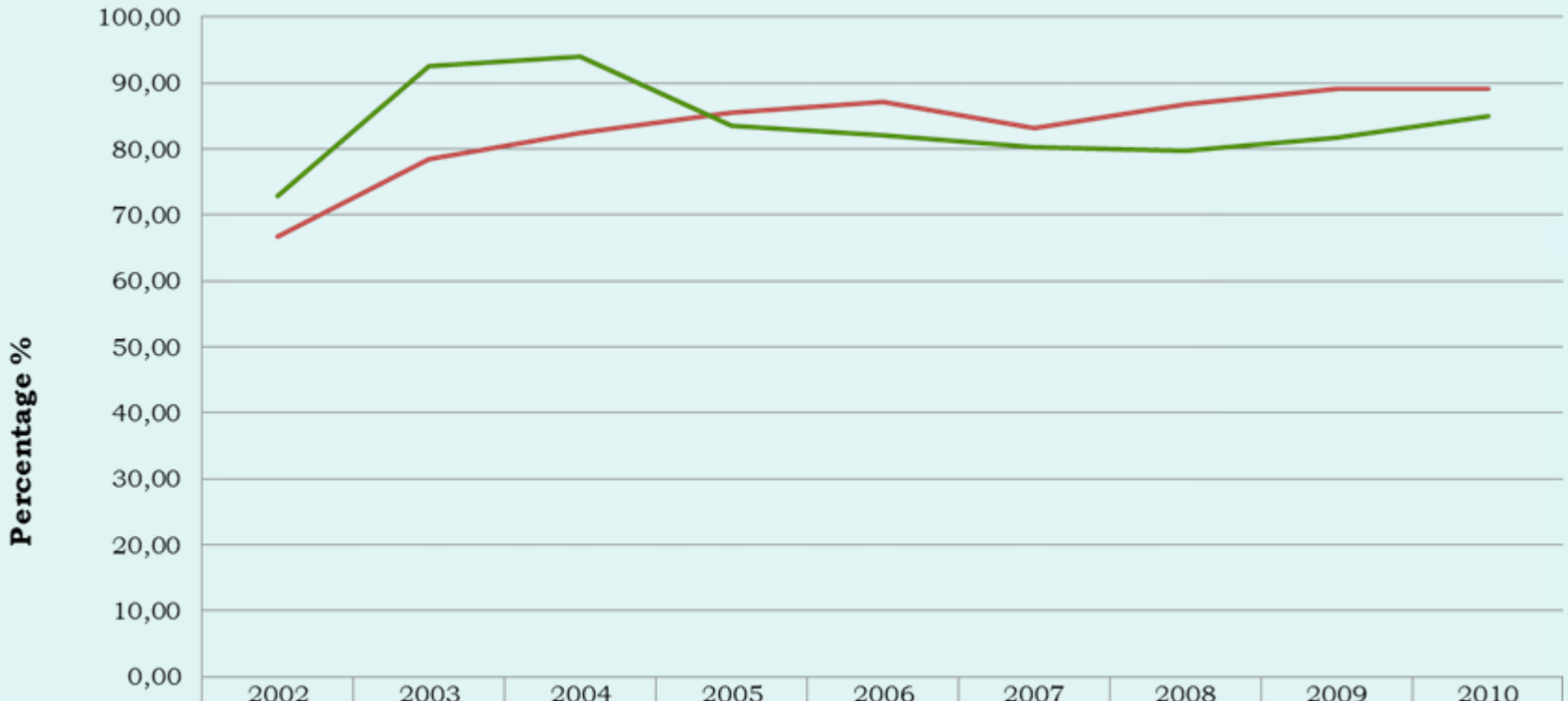
Rabies eradication in 2010

Monitoring of 2010 vaccination

TARGET	RESULTS
8 foxes to be shot per 100 km² of foxes' habitat premisses covered by vaccination (in total - 21 393)	Foxes shot – 23 153
TESTS	**RESULTS**
Uptake of vaccine (TC)	Number of tests performed – 22 486 Uptake level: 89,15%
Seroconversion (RFFIT)	Number of tests performed – 16 319 Seroconversion level: 84,90%

Rabies eradication in 2010

Results of vaccination



	2002	2003	2004	2005	2006	2007	2008	2009	2010
Vaccine uptake (%)	66,70	78,40	82,50	85,56	87,17	83,17	86,87	89,12	89,15
Seroconversion (%)	72,90	92,60	94,00	83,60	82,12	80,21	79,66	81,72	84,90

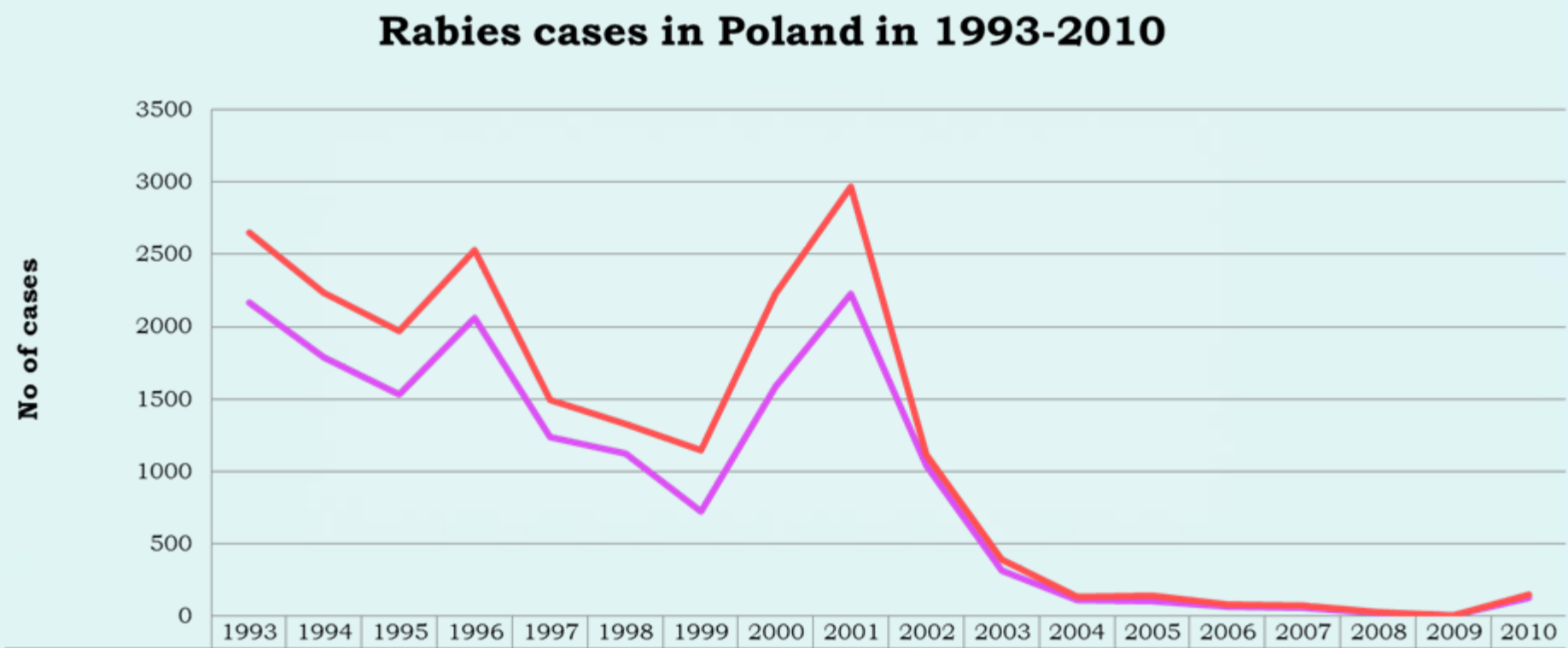
Rabies eradication in 2010

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 2010

No of cases



	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Wild animals	2166	1788	1528	2064	1239	1120	721*	1583*	2224*	1038	314	114	102	63	55	24	8	129
Total	2648	2238	1973	2527	1494	1329	1148	2224	2964	1119	388	136	138	82	70	29	8	151

* - only wild foxes are indicated

Rabies eradication in 2010

Cases of Rabies – Details

Area	Rabies cases																							
	Domestic animal										*Wildlife*													
Region	dog	cat	cattle	equine	sheep	goat	pig	stray dog	other		fox	raccoon dog	raccoon	wolf	badger	marten	other mustelides	other carnivores	wild boar	roe deer	red deer	fellow deer	other	bat
dolnośląskie																								
kujawsko-pomorskie																								
lubelskie	1	1									9	1												
lubuskie																								
łódzkie																								
małopolskie	5	6	4	1	2			1			94				1	3				1				
mazowieckie																								1
opolskie																								
podkarpackie											13													
podlaskie		1									1													2
pomorskie																								
śląskie																								
świętokrzyskie																								
warmińsko-mazurskie																								1
wielkopolskie																								1
zachodniopomorskie																								1
Total	6	8	4	1	2			1			117	1			1	3				1				6

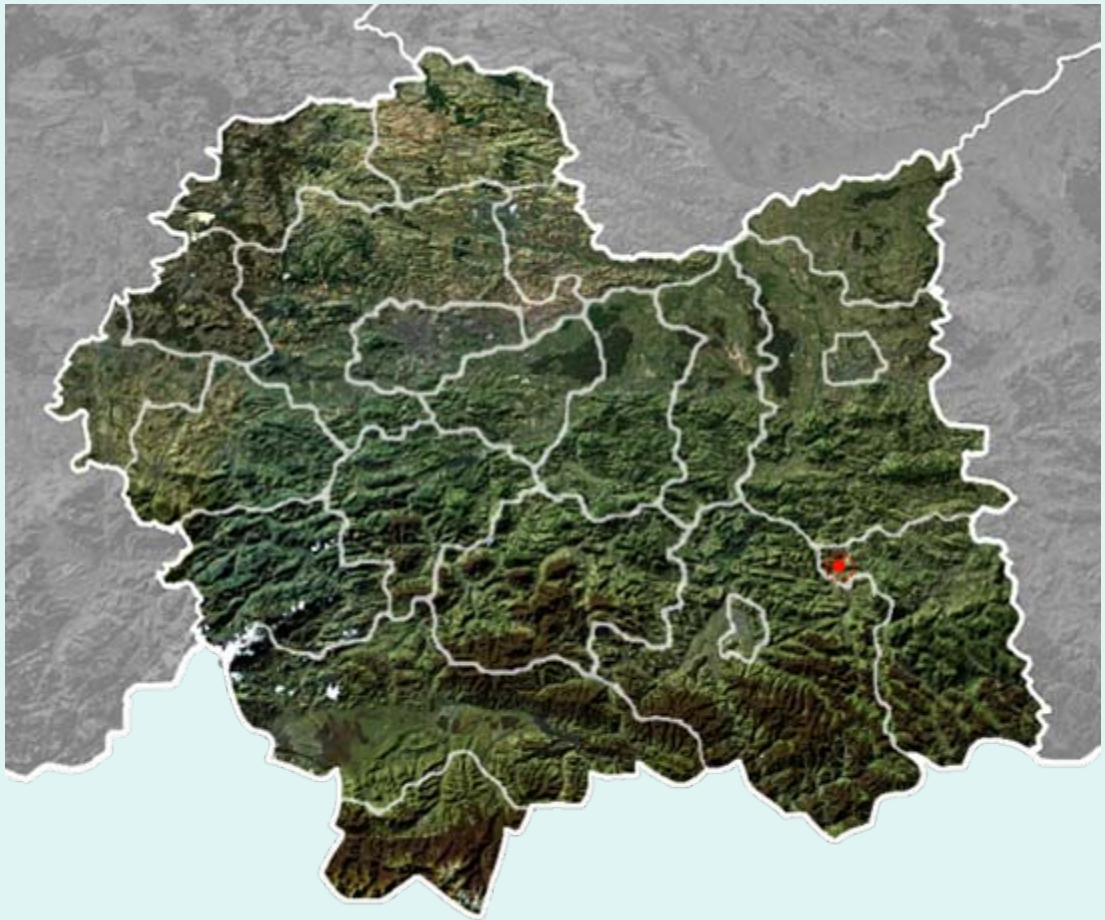
Domesticanimals	22
Wildlife	129
Total	151

Rabies eradication in 2010

Localization of rabies cases

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”

118 cases in total have been notified until the end of 2010

Rabies in małopolskie region

Analysis

- Density of foxes investigated -> 0.8 fox/km^2
- 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.**

Rabies in małopolskie region

Analysis ⇨ Conclusions

- Origin of virus: still unknown;
- Disease to be caused by field strain of virus;
- Rabies virus variant isolated in małopolskie region has the highest similarity to the variant NEE (genotype 1);
- **Flood, which took place in May on the area of małopolskie region, probably could influence the immunization of foxes.**

Rabies eradication in 2010

Number of rabies cases – General conclusions

- Increase of the number of rabies cases in comparision with previous year caused mostly by the epizootic situation in małopolskie region;
- 118 from 151 rabies cases confirmed on the territory of Poland in 2010 occurred in małopolskie region;
- **As a result of the implemented measures the number of rabies cases is consecutively declining in 2011 in małopolskie region.**

Rabies eradication in 2010

Co-financing

Eligible costs:

- Cost of vaccine doses and baits;
- Cost of vaccine distribution;
- Rapid fluorescent focus inhibition tests (RFFIT);
- Tests for the presence of tetracycline in bones cuts (TC);
- Differentiation of rabies virus strains;
- Tests for the quality of vaccine.

Co-financing (Commission Decision 2010/732/EU):

Maximum amount of the Union's financial contribution: 7 380 000 €

If you have any questions, please send them to the e-mail address: pawel.makowski@wetgiw.gov.pl .

THANK YOU FOR YOUR ATTENTION