

# Overview on the Implementation of the Rabies Programme in 2015 in Bulgaria

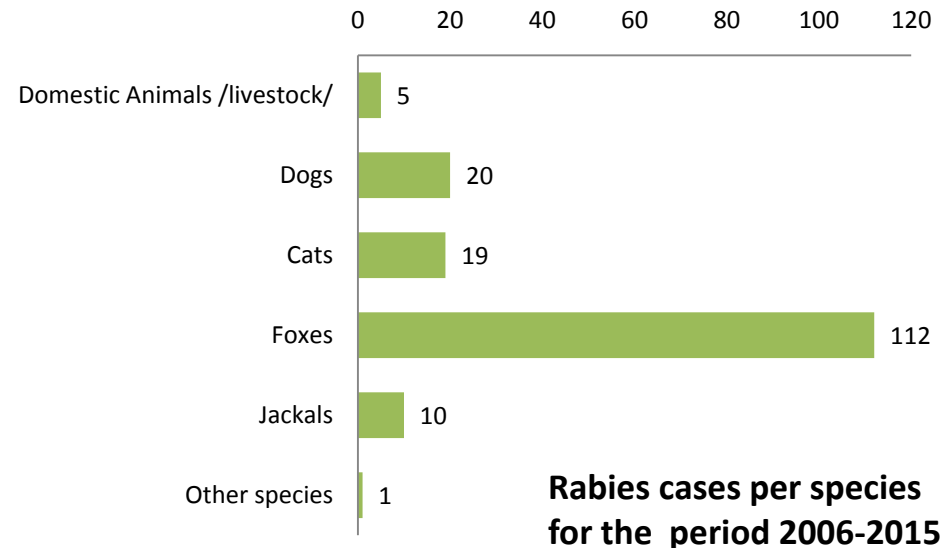
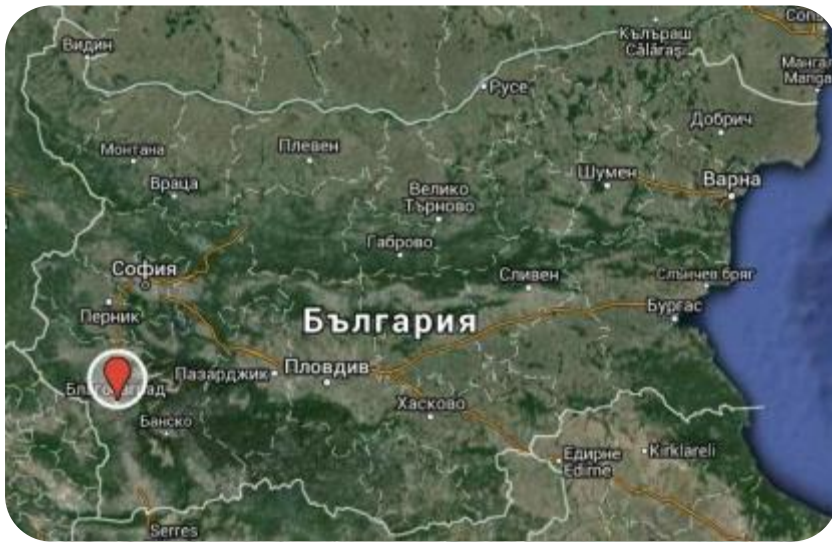
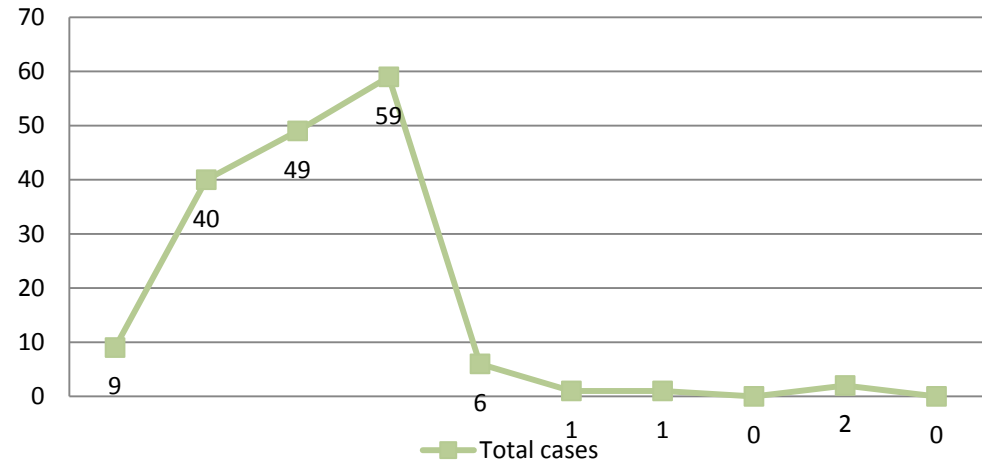


*SC PAFF, 5-6 July 2016, Brussels*

# Epidemiological situation

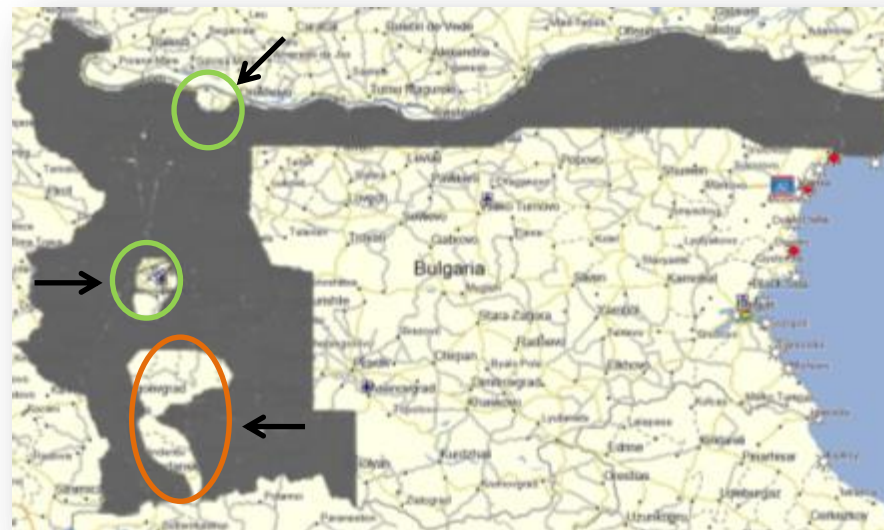
- No cases in 2015
- Total number of cases for the last 10 years – 167
- Last rabies case reported in June 2014

Number of rabies cases 2006-2015



# Vaccination campaigns

- Oral vaccination of foxes – operational since 2009
- Lysvulpen vaccine, Bioveta Czech Republic, 20 baits/sq km



■ *Manual distribution*

■ *High mountain areas not covered by vaccination*

Year	Campaigns	Districts	Territory covered (km <sup>2</sup> )
2009	2 spring & autumn	18	55 037 km <sup>2</sup>
2010	1 spring	19	55 995 km <sup>2</sup>
2011	1 spring	19	55 995 km <sup>2</sup>
2012	2 spring & autumn	20	59 500 km <sup>2</sup>
2013	2 spring & autumn	20	59 500 km <sup>2</sup>
2014	2 spring & autumn	22	79 119 km <sup>2</sup>
<u>2015</u>	<u>2 spring and autumn</u>	<u>16</u>	<u>54 716 km<sup>2</sup></u>

- Total number of baits distributed in 2015 – 2 043 710
- 6 batches distributed – all tested in ANSES

# Vaccination campaigns

Wildlife oral vaccination – aerial distribution					
Region/Area	Month	Number of baits *	Size of vaccinated area (km <sup>2</sup> )	Distribution method	Bait density (per km <sup>2</sup> )
1	2	3	4	5	6=3÷4
Blagoevgrad, Kyustendil, Pernik, Sofia city, Sofia region, Smolyan, Pazardjik, Dobrich, Silistra, Pleven, Veliko Tyrnovo, Razgrad, Ruse, Montana, Vraca, Vidin	spring (28.06.2015 - 08.07.2015)	1 009 610	50 473	aircrafts	20,00
	autumn (06.11.2015 - 30.11.2015)	1 010 100	50 450		20,02
<b>Total</b>		<b>2 019 710</b>	<b>50 461,5</b>	<b>aircrafts</b>	<b>20,01</b>

Wildlife oral vaccination – manual distribution					
Region/Area	Month	Number of baits *	Size of vaccinated area (km <sup>2</sup> )	Distribution method	Bait density (per km <sup>2</sup> )
1	2	3	4	5	6=3÷4
Kozloduy Powerplant (Vraca and Montana), Sofia-city - suburbs	spring	12 000	4 300	manual	2,79
	autumn	12 000	4 300		2,79
<b>Total</b>		<b>24 000</b>	<b>4 300</b>	<b>manual</b>	<b>2,79</b>

# Monitoring of vaccination effectiveness

Region	Species	Serological tests				Tests for the presence of biomarker – Tetracycline (T)				IFT		
		Type of test	Number of tests	Seropositive	% seropositive	Type of test	Number of tests	Biomarker present	% marker presence	Type of test	Number of tests	Positive
1	2	3	4	5	$6=(5\div 4)\times 100$	7	8	9	$10=(9\div 8)\times 100$	7	8	9
<b>total</b>	<b>foxes</b>	<b>ELISA</b>	<b>894</b>	<b>383</b>	<b>42,84</b>	<b>T</b>	<b>1236</b>	<b>800</b>	<b>64,72</b>	<b>IFT</b>	<b>1236</b>	<b>0</b>

- Seroconversion in foxes – 42,84% in 2015 → 37,37% in 2014
- Tetracycline biomarker in foxes in 2015 – 64,72% → 59,89% in 2014
- Seroconversion in jackals – 24,6% in 2015 → 31,25% in 2014
- Tetracycline biomarker in jackals in 2015– 58,45% → 73,75% in 2014

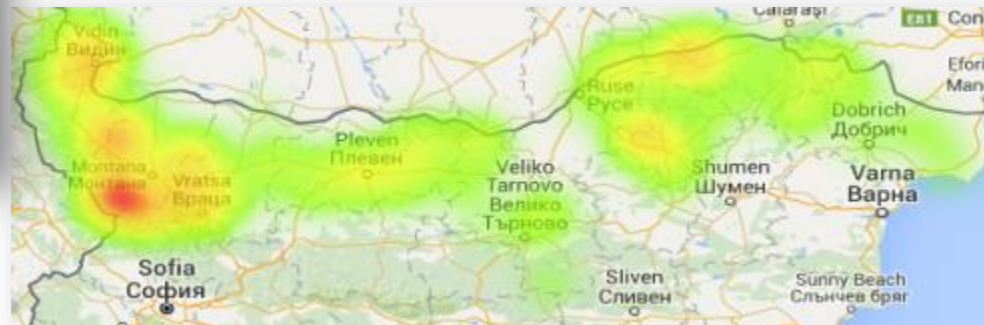
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1	2	3	4	5	$6=(5\div 4)\times 100$	7	8	9	$10=(9\div 8)\times 100$	7	8	9
<b>total</b>	<b>jackals</b>	<b>ELISA</b>	<b>126</b>	<b>31</b>	<b>24,60</b>	<b>T</b>	<b>426</b>	<b>249</b>	<b>58,45</b>	<b>IFT</b>	<b>426</b>	<b>0</b>



# Monitoring of vaccination effectiveness



Seroconversion



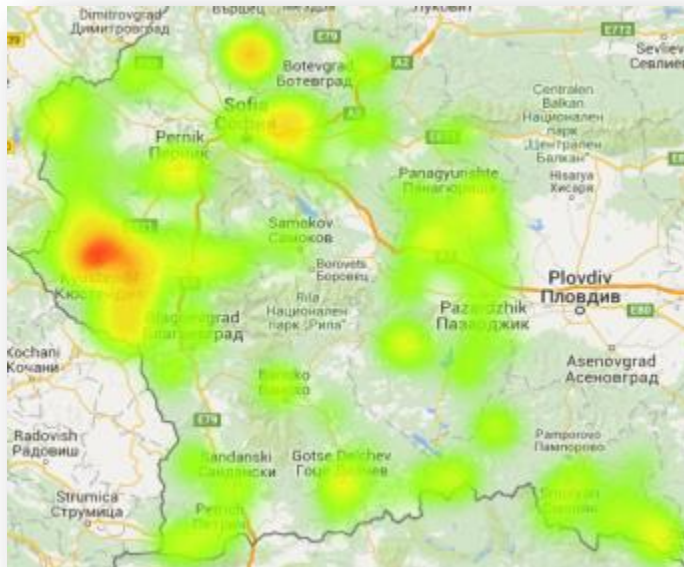
TMT presence

Monitoring of vaccination in the northern vaccinated zones of the country

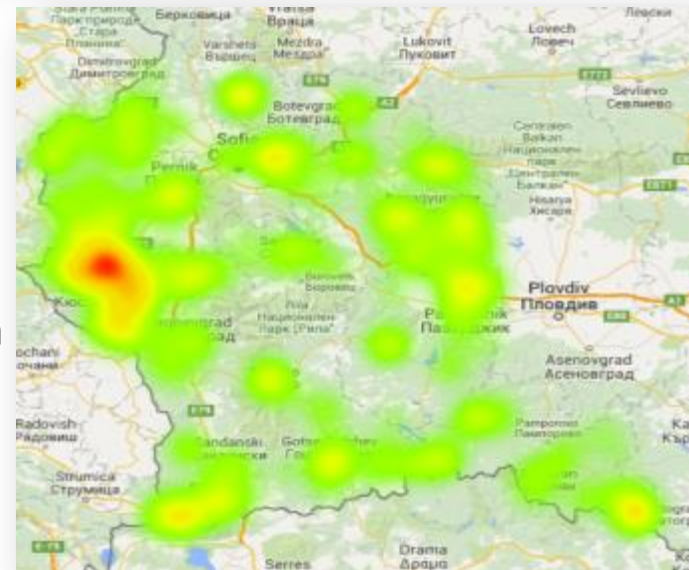
# Monitoring of vaccination effectiveness



Monitoring of vaccination in the southwestern vaccinated zones of the country



Seroconversion



TMT presence



# Surveillance activities

Region	Species	IFT			Region	Species	IFT		
		Type of test	Number of tests	Positive			Type of test	Number of tests	Positive
total	foxes	IFT	287	0	total	jackals	IFT	495	0

**Active surveillance in non-vaccinated zones on foxes and jackals in 2015**



**Active surveillance in non-vaccinated zones in 2015**

**FAT carried out on the territory of the whole country in 2015**



# Surveillance activities – passive surveillance and suspects

Region	Domestic animals				Wild animals				
	dog	cat	sheep	goat	fox	wolf	badger	red deer	jackals
<b>Total</b>	<b>8</b>	<b>4</b>	<b>6</b>	<b>1</b>	<b>27</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>2</b>

**Domestic and wild suspect animals tested negative by IFT in 2015**



- In total 53 suspect animals were tested in 2015
- Decrease in the number of samples for passive surveillance by 55% in comparison to the results in 2014 – main gap in the implementation of the programme

# Thank you for your attention



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