



NATIONAL SANITARY VETERINARY AND FOOD SAFETY AUTHORITY

Rabies Situation and Oral Vaccination of Foxes in 2015 in ROMANIA

July 2016

SCoPAFF, Brussels



The objectives of 2015 programme

- - control of rabies in fox population
- - surveillance of rabies in wild animals population
- - monitoring of oral vaccination in fox population
- - evaluation of vaccination efficiency
- - surveillance of rabies prevalence in the population of domestic animals, including dogs and cats



General data for the implementation of rabies vaccination program in foxes

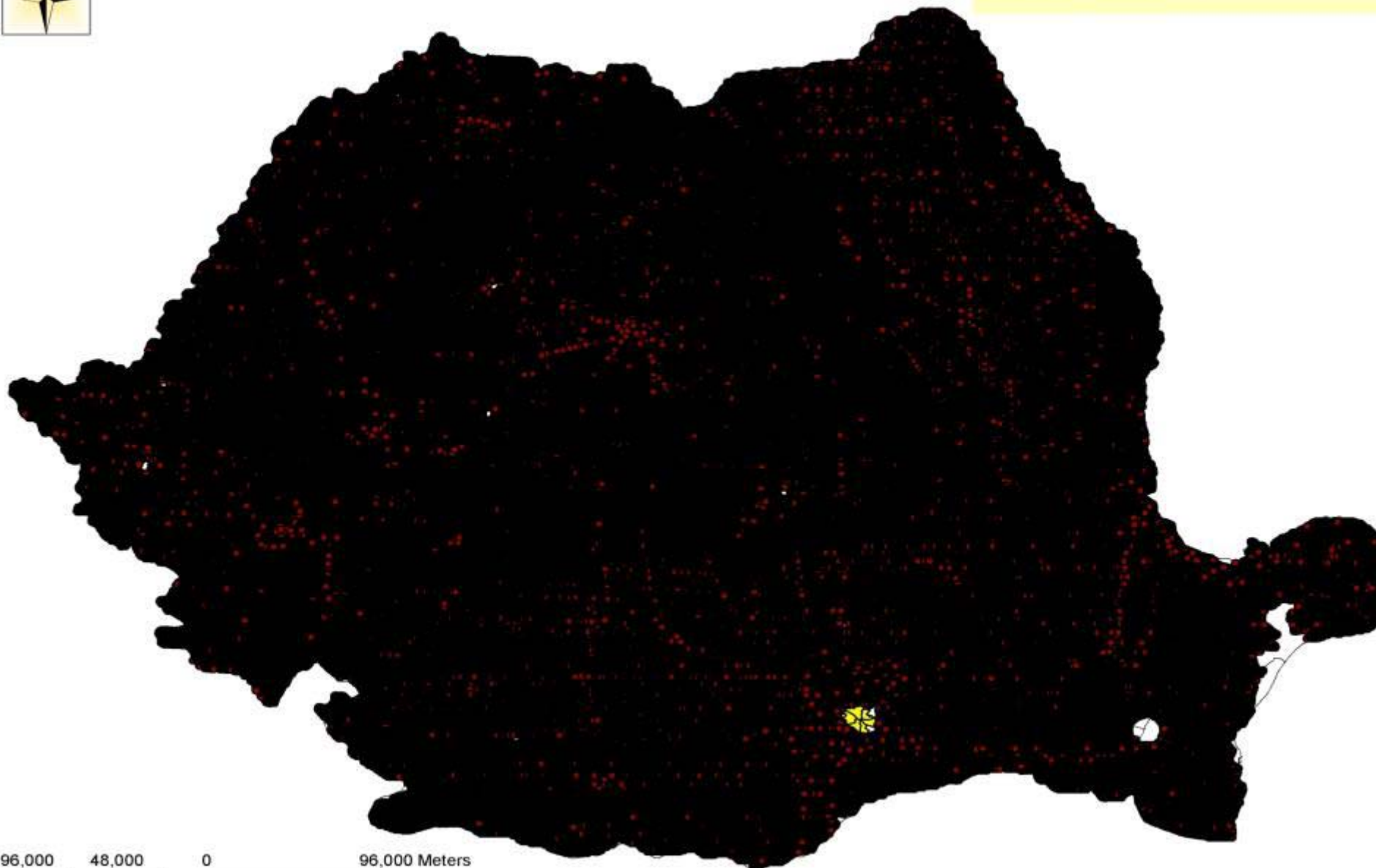
- Vaccination on all territory of Romania (41 counties) - the baits distribution includes border with Serbia, Hungary, Ukraine, Moldova and Bulgaria
- In 2015 spring and autumn campaign were performed –
 - Spring campaign started in 12 may and ended in 14 june 2015
 - Autumn campaign started in 19 september and ended in 14 november 2015
- Estimated area for vaccination : 213.375 km² for each campaign
- Baits distributed by airplanes:
 - Spring - 5.333.275_ baits with an approx. of 25 baits/km²
 - Autumn - 5.333.937 baits with an approx. of 25 baits/km²
- Baits manual distributed: 150.800 baits in both campaigns
- Total length of flying tracks: aprox. 950.000 linear kms/both campaign
- Total number of flying hours: 6200 hrs/both campaigns
- 30 airplanes with fixed wings used in both campaigns

Map of aerial distribution in 2015 - spring campaign



ROMANIA

Legend
Distributia aeriana a momeliior vaccinale antirabice
Campania de primavara 2015



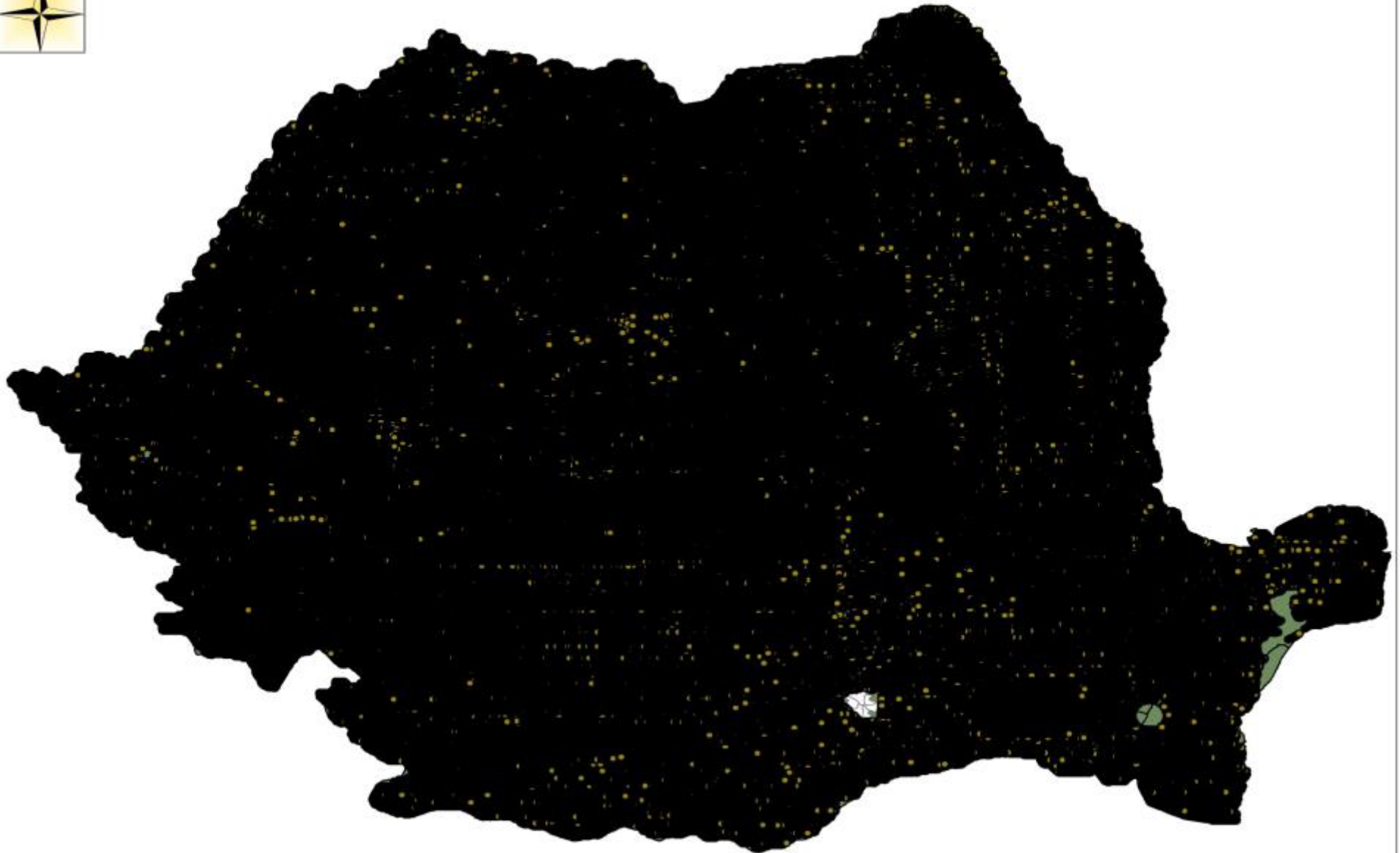
96,000 48,000 0 96,000 Meters



Map of aerial distribution in 2015 - autumn campaign



Momeli_vaccinale_vulpi_distribuite_aerian_toamna_2015



ROMANIA



Legend
Distributia aeriana a momeliilor vaccinale antrabice
Campania de primavara 2015

500 metri

PRODULEȘTI

PODUL RIZII

DĂMBOVITA

BRANIȘTEA

DAMBOVICIOARA

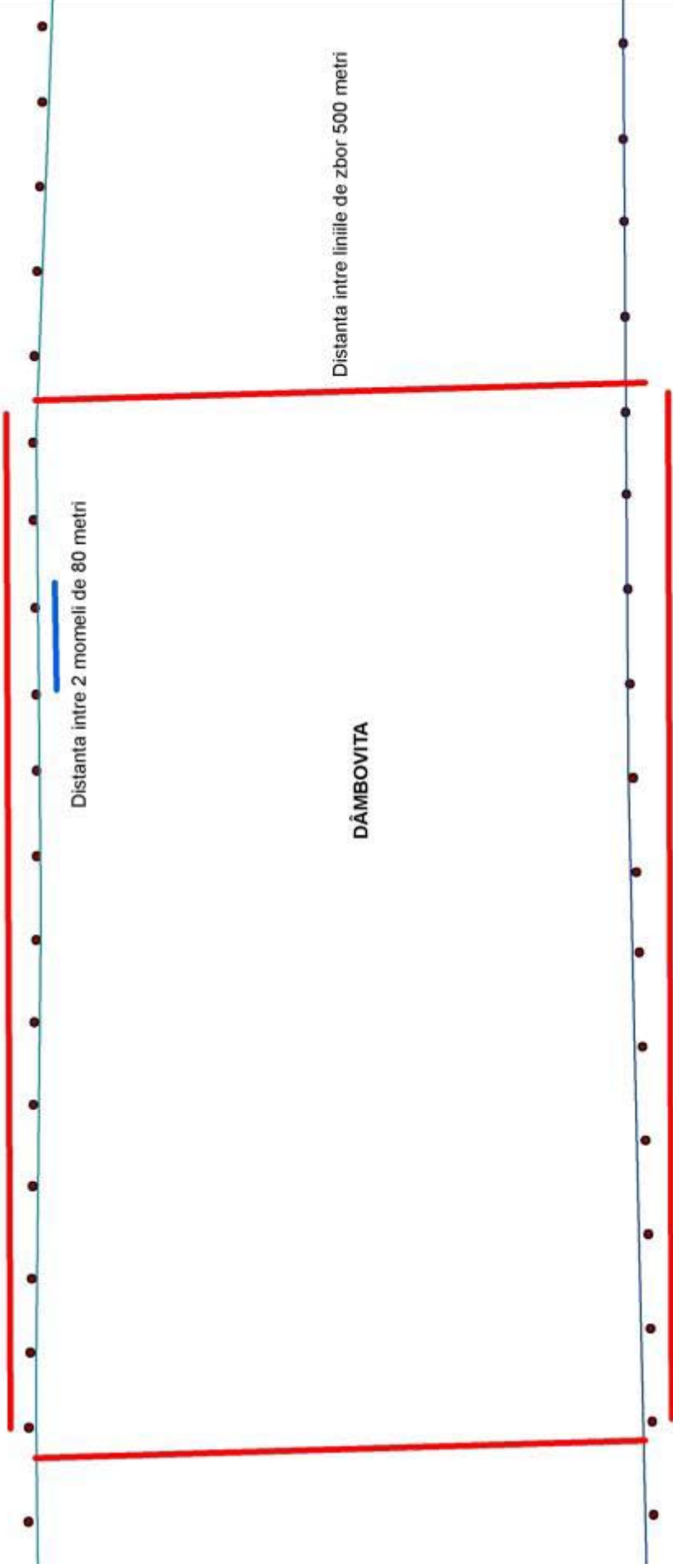




ROMANIA

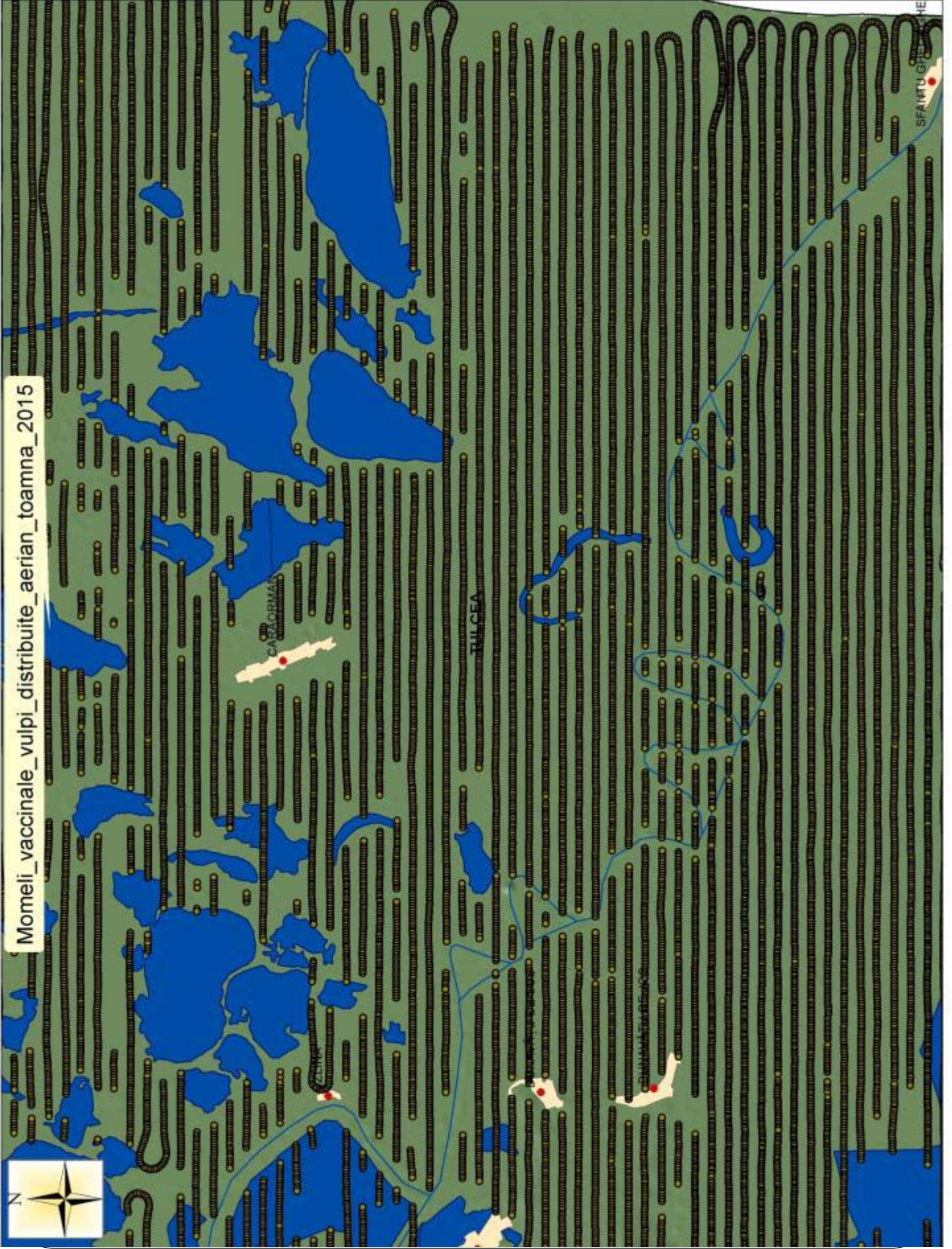
Legend
Distributia aeriana a momelilor vaccinale antrabice
Campania de primavara 2015
Zona de 1 km² ce contine 25 momeli/km²

Lungime de 1 km



170 85 0 170 Meters

Momeli_vaccinale_vulpi_distribuite_aerian_2015





Surveillance and monitoring

- FAT tests – for rabies confirmation on shot foxes – 8378 tests
- AB-ELISA : for efficiency of vaccination – 6418 tests
- Tetracycline Biomarker detection - 7482 tests
- Titration of baits for suitability of the vaccine – 29 tests (3 baits/test)
- Age determination – yes
- PCR – **All viruses isolated by PCR-sequencing (PCR positive) (for molecular characterization of rabies isolates) showed only wild strains and no vaccine strain.**



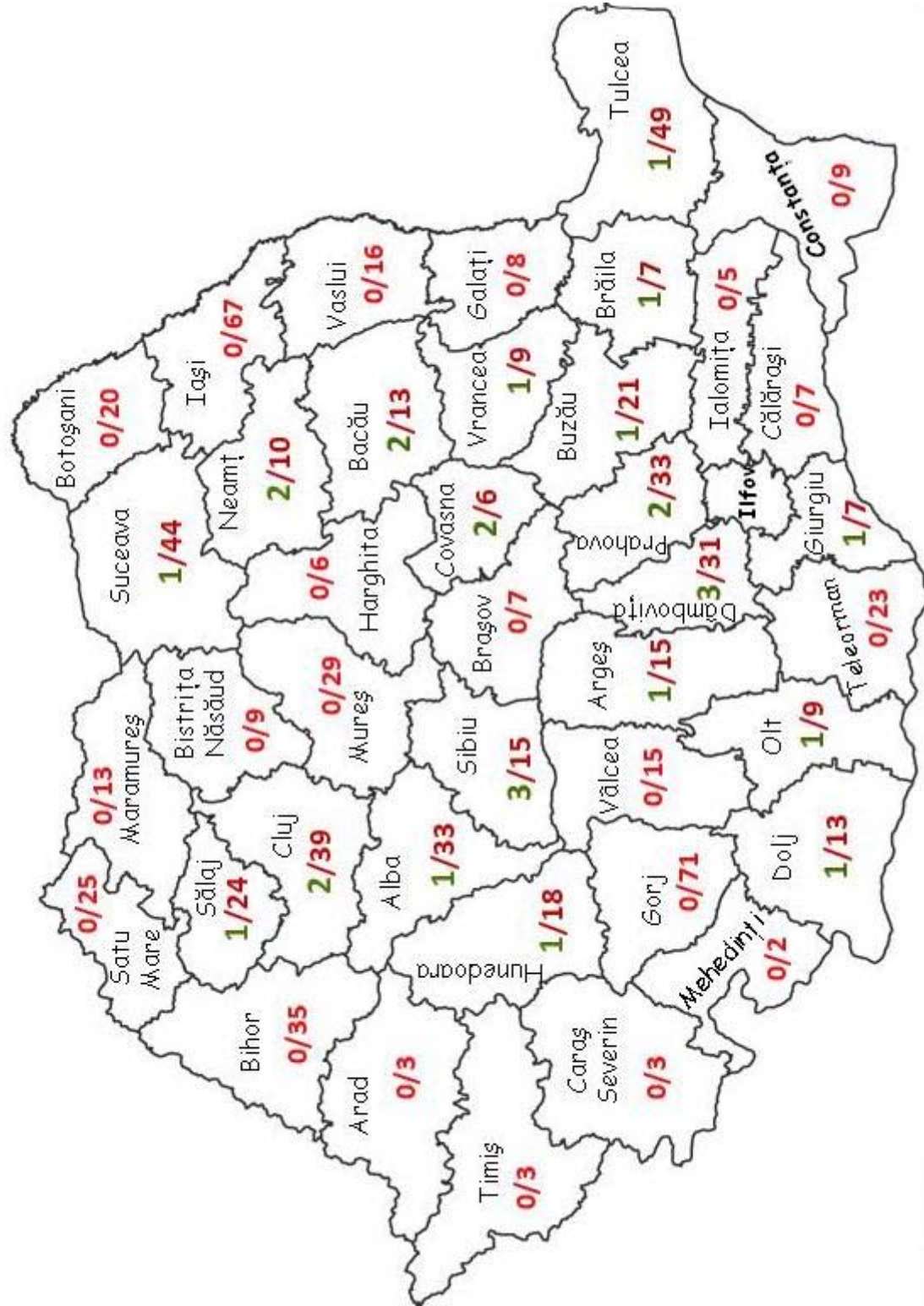
Surveillance

- **FAT – for rabies confirmation**
 - **active surveillance - 8378 tests** from which **11 positive**
 - **passive surveillance - 771 tests** (found dead, with clinical signs and by car accidents):
 - 390 domestic animals **10 positive** – 2,5% positive
 - 307 foxes from which **4 positive** – 1,3 % positive
 - 74 other wild animals from which **3 positive** – 4 % positive

RABIE 2015: For each Romanian administrative unit (county):

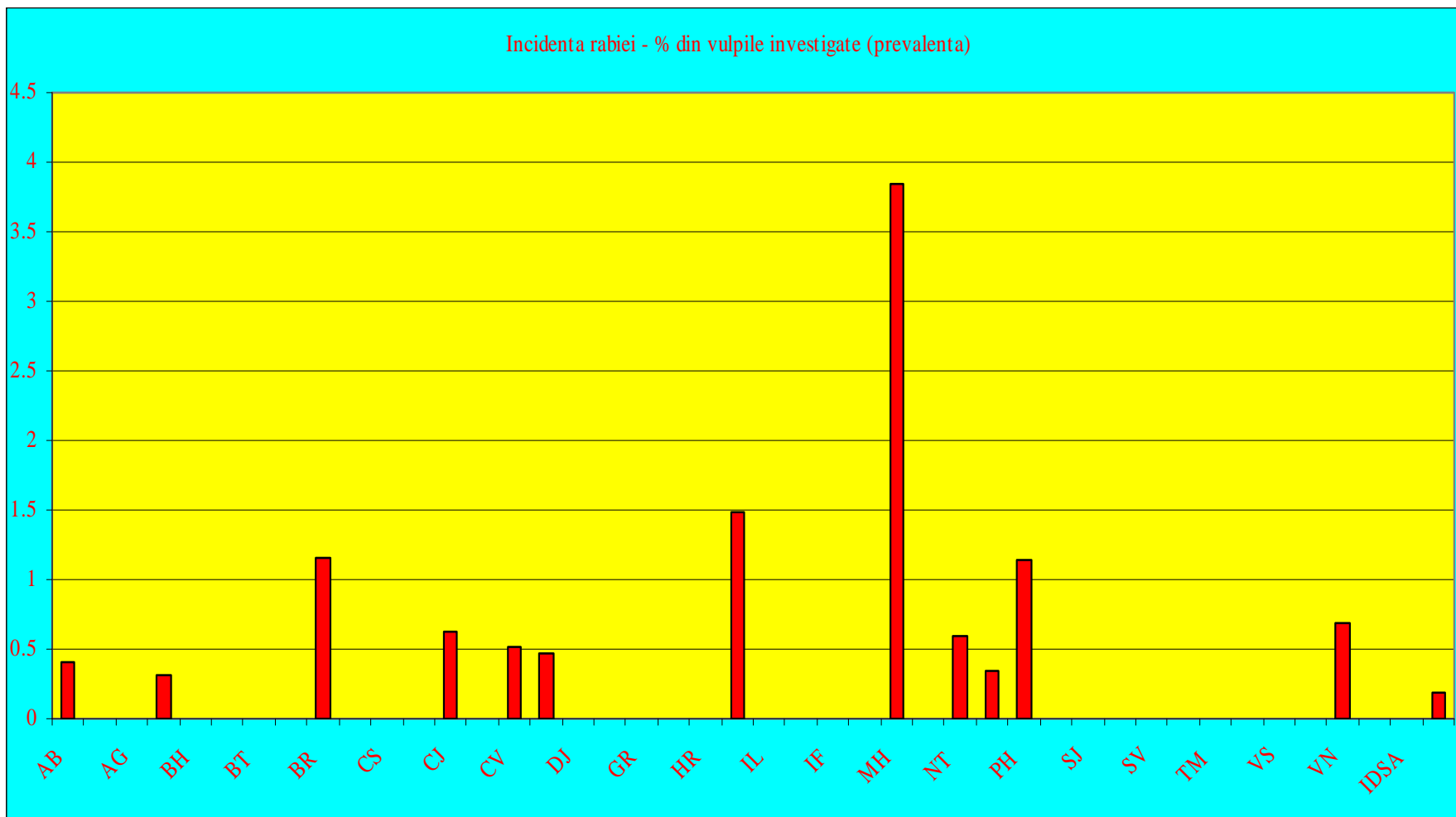
No cases / No. of surveillance tests

Denominator means: tests performed on foxes sampled within the passive surveillance (suspects, having a modified behavior + killed + found dead) + tests performed on other animals than foxes sampled within the passive surveillance

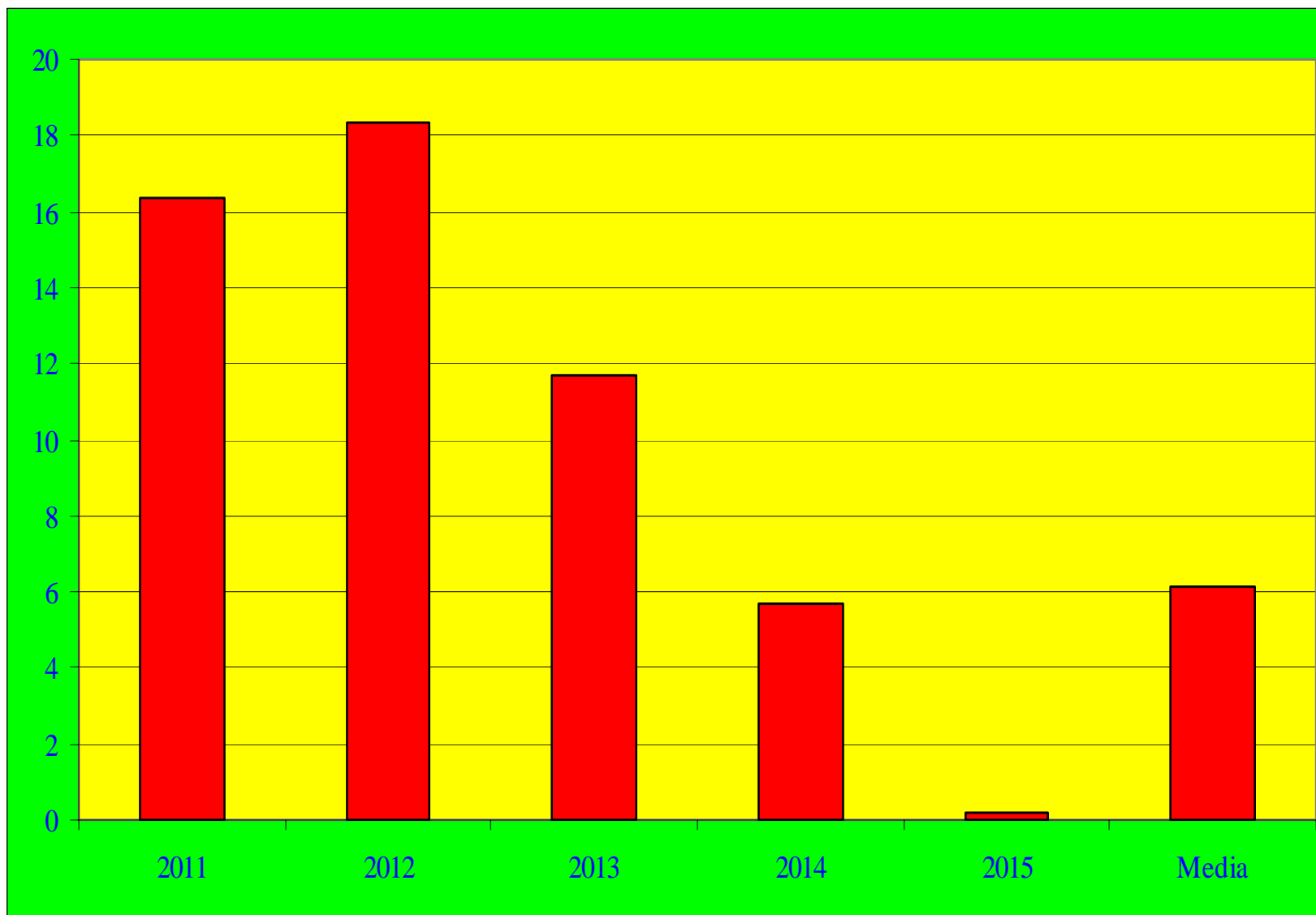


28 / 771 No. of rabies cases in Romania / from a number of passive surveillance tests

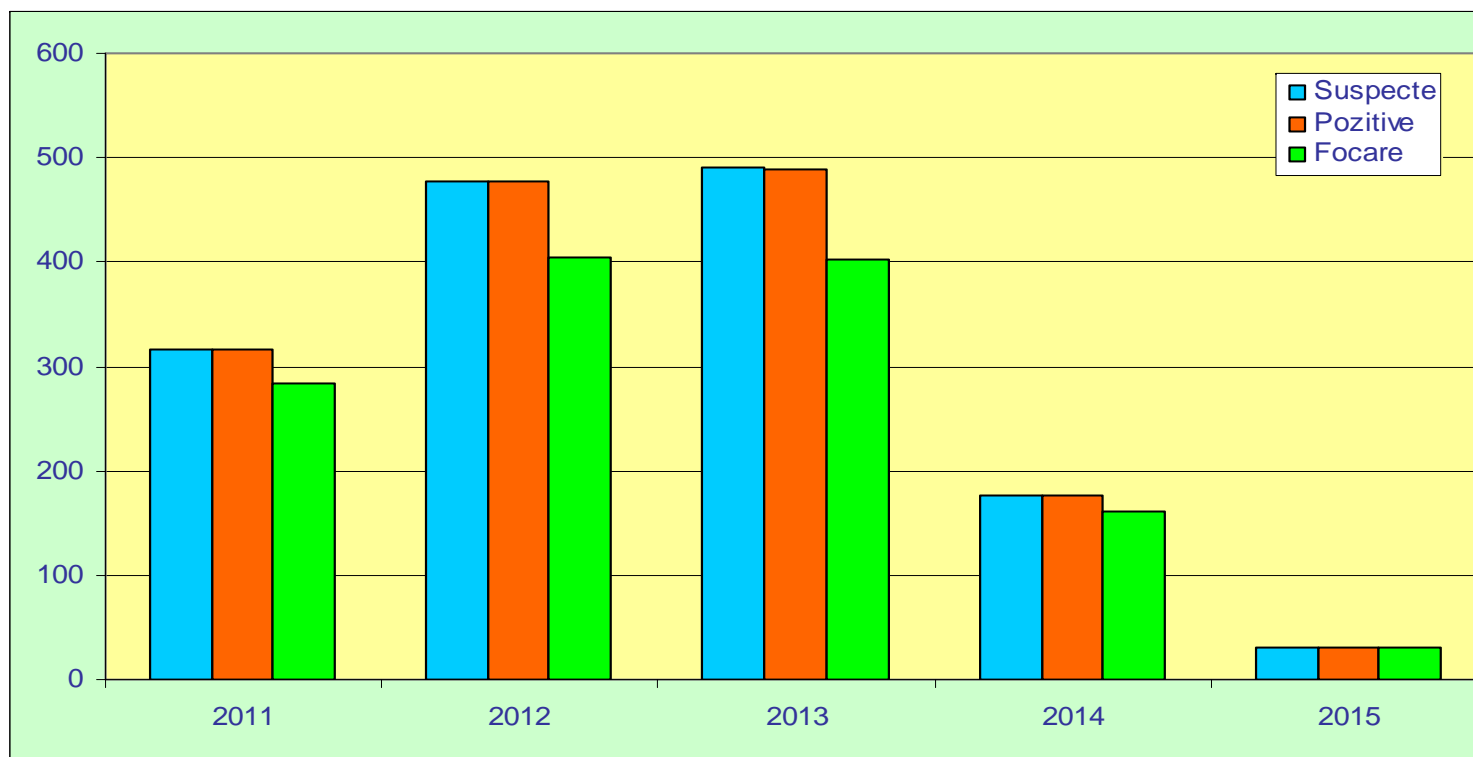
Graficul nr. 1 – Rabies incidence in wild foxes per counties- 2015



Graficul nr. 2 – Rabies prevalence at wild foxes– 2011 - 2015



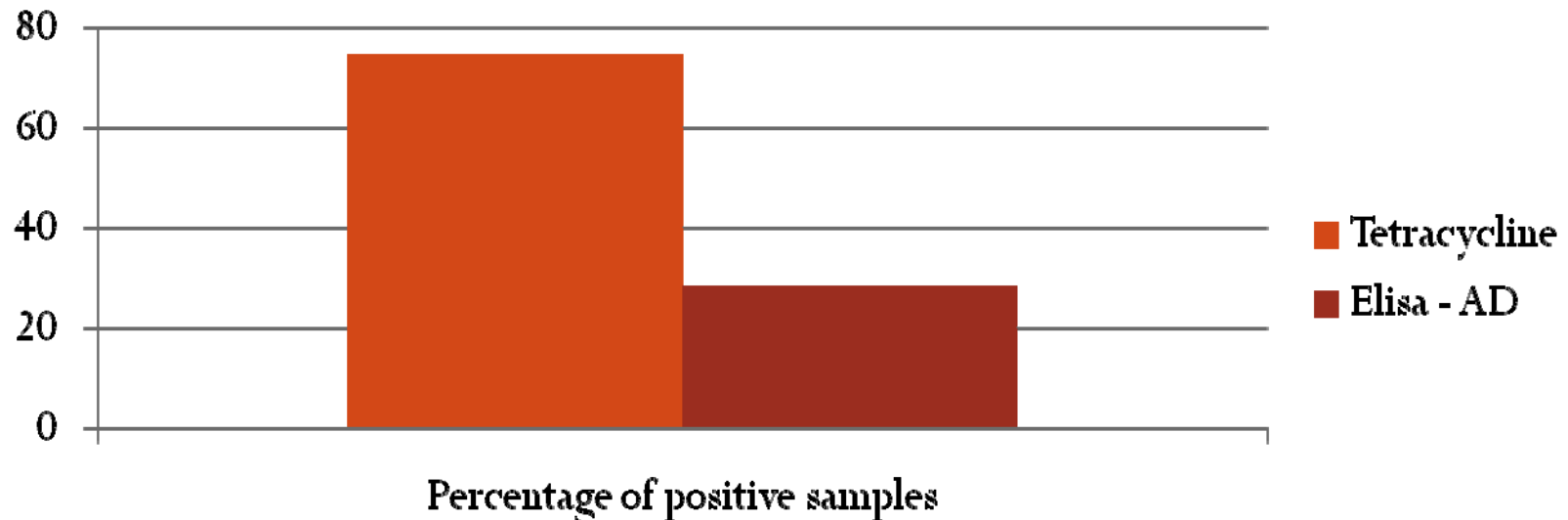
Graficul nr. 3 – Dinamic situation of rabies in Romania between 2011-2015





Monitoring of 2015 rabies eradication programme

- **Evaluation of vaccination efficacy**
 - Bait up -take - determination of bio-marker TTC :
-7482 samples - 5558 positive and 1924 negative = **74,42 % tetracycline +**
 - Detection of antibodies from thoracic liquid - Elisa:
-6418 samples -1816 positive and 4602 negative = **28,30 % seroconversion**
 - Titration of baits for suitability of the vaccine – all 29 batches tested showed that titer was into the approved level.



Conclusions

- Higher number of foxes sampled for evaluation of vaccination efficiency in 2015 comparing with previous years (% from the programmed number): 85,71 in 2015 comparing with 78.21% in 2014 and 39% in 2013.
- Lower number of positive animals for rabies, in 2014 – 161 outbreaks and in 2015 – 28 outbreaks, than previous years was.
- All isolated virus strains were wild strains.
- Improvement seen after the autumn campaign 2014 and spring and autumn campaigns 2015 should provide sufficient information to demonstrate that rabies eradication is progressing according to the objectives of the programmes.

Rabies Program Cost 2015

- **Total costs: 5.647.037 €**
- Total sampling (shot foxes) 45 537 €
- Total Testing 92 811 €
- Total FAT 116. 841€
- Purchase of vaccine 2. 516.365 €
- Aerial distribution costs 2 492.785 €
- Public information campaign 382. 698 €



I'm lucky, I'm vaccinated

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