



ROMANIA

NATIONAL SANITARY VETERINARY AND FOOD SAFETY AUTHORITY

Rabies Situation and Oral Vaccination of Foxes in 2016 in ROMANIA

June 2017

SCoPAFF, Brussels



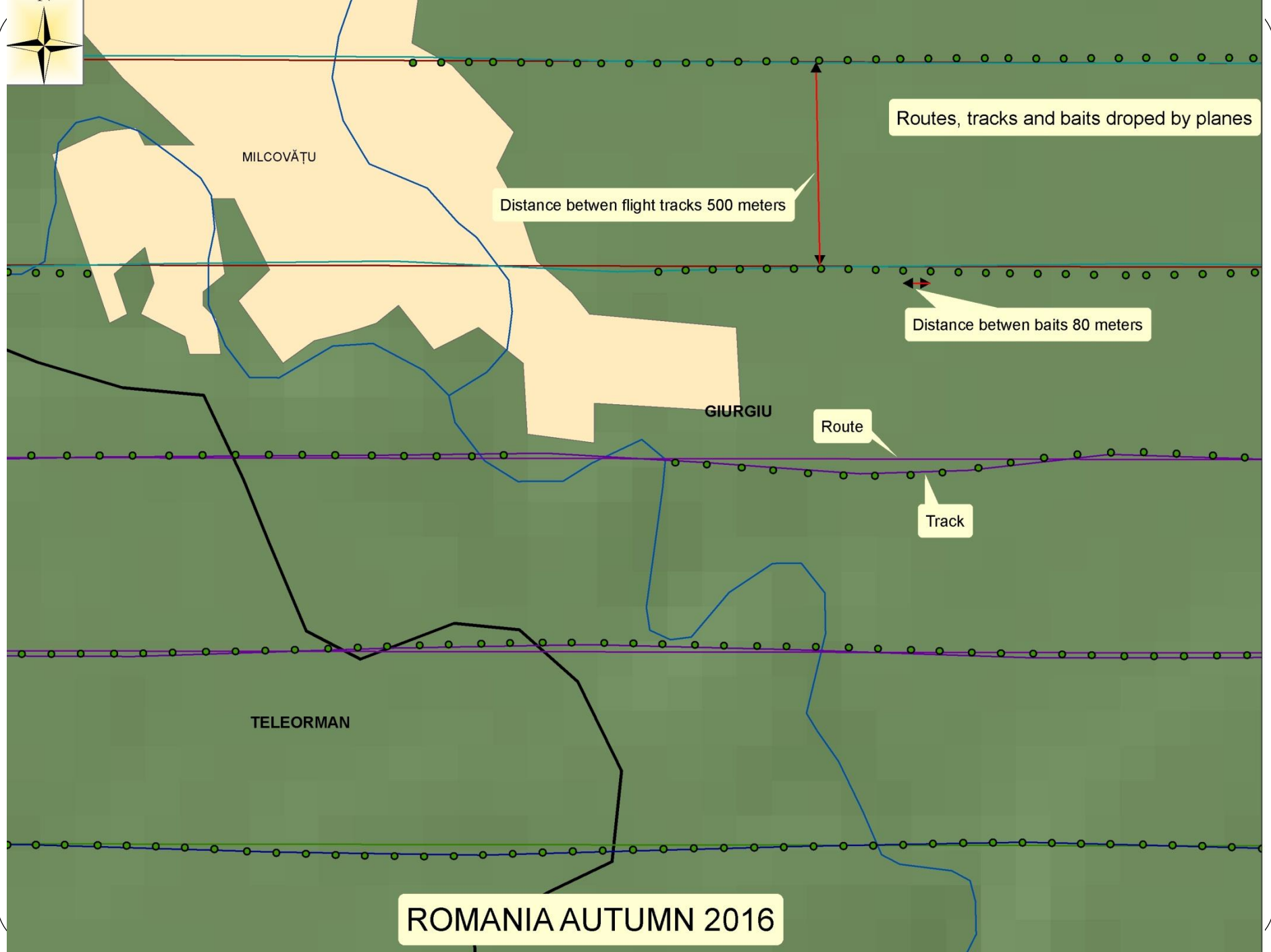
The objectives of 2016 programme

- - 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 2016 spring and autumn campaign were performed –
 - Spring campaign started in 19 april and ended in 07 june 2016
 - Autumn campaign started in 27 september and ended in 16 november 2016
- Estimated area for vaccination : 213.375 km² for each campaign
- Baits distributed by airplanes:
 - Spring - 5.323.182 baits with an approx. of 25 baits/km²
 - Autumn - 5.326.607 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



MILCOVĂȚU

Distance between flight tracks 500 meters

Routes, tracks and baits dropped by planes

Distance between baits 80 meters

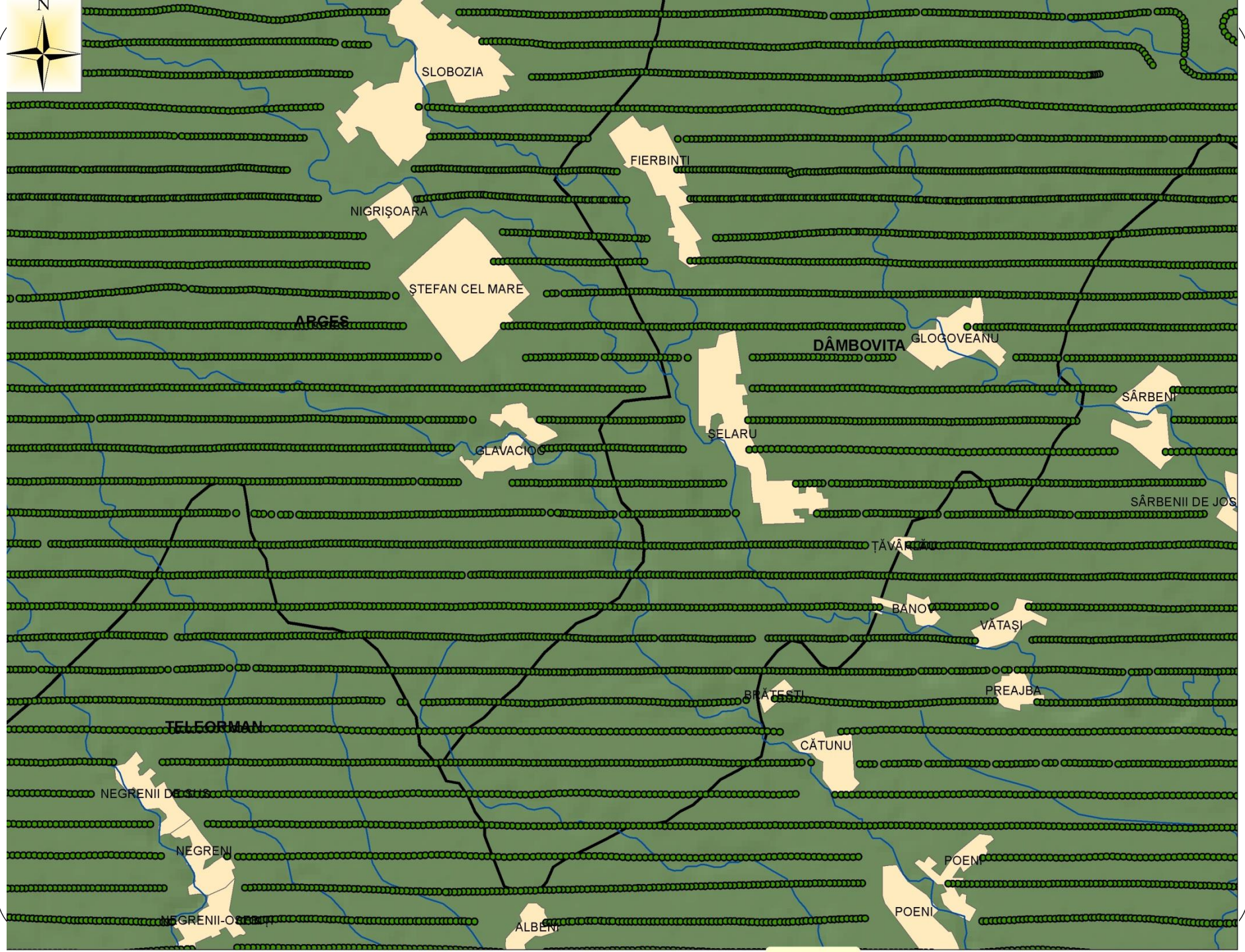
GIURGIU

Route

Track

TELEORMAN

ROMANIA AUTUMN 2016





Surveillance and monitoring

- FAT tests – for rabies confirmation on shot foxes – 8048 tests
- AB-ELISA : for efficiency of vaccination – 7192 tests
- Tetracycline Biomarker detection - 7924 tests
- Titration of baits for suitability of the vaccine – 27 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 - 8048 tests** from which **1 positive** in Suceava county

- **passive surveillance - 790 tests** (found dead, with clinical signs and by car accidents):

- 387 domestic animals **12 positive** – 3,1% positive
 - 359 foxes from which **3 positive** – 0,8 % positive
 - 45 other wild animals from which **0 positive** – 0 % positive

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Legend

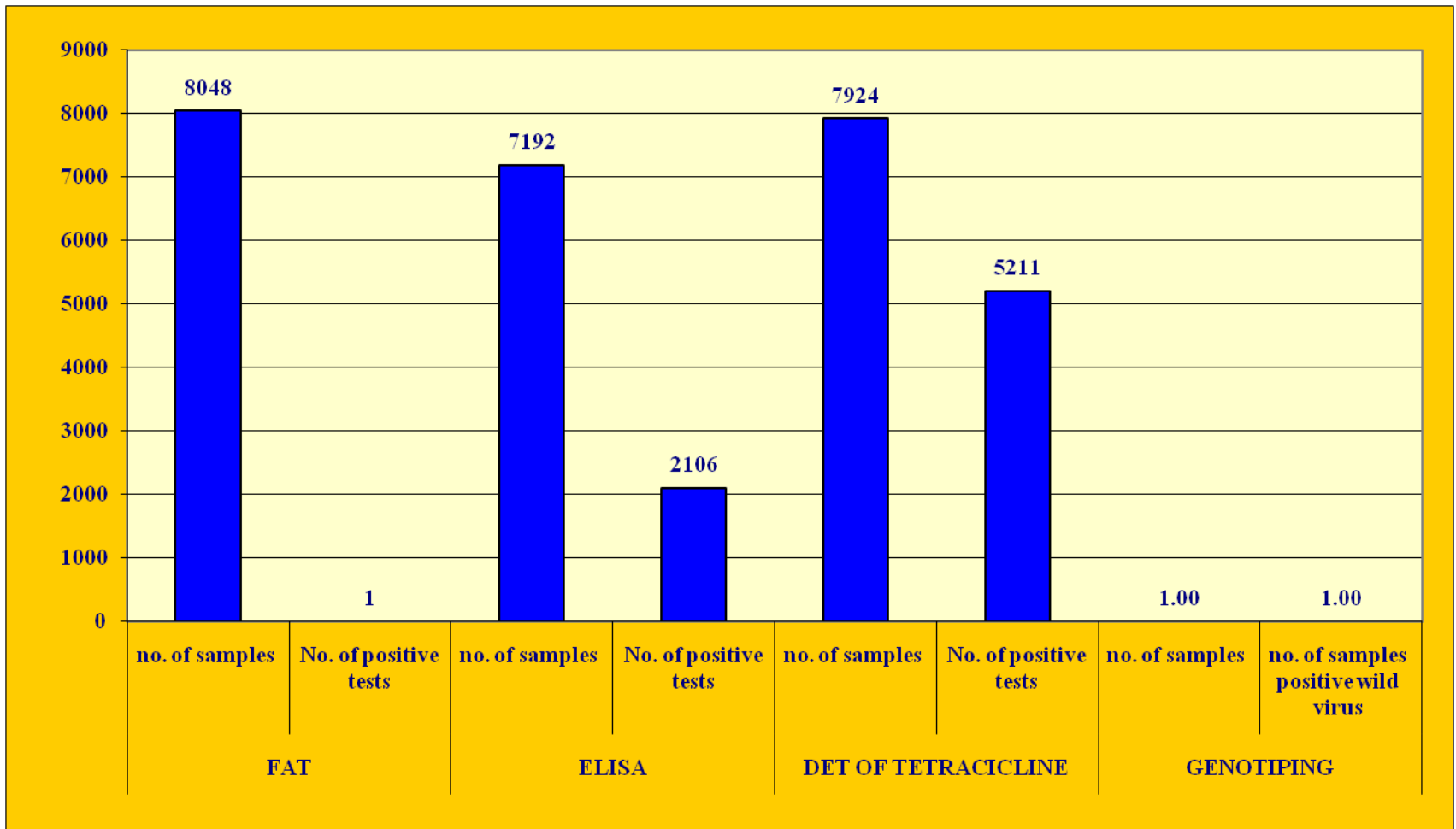
- rabies outbreaks 2016 Romania Events



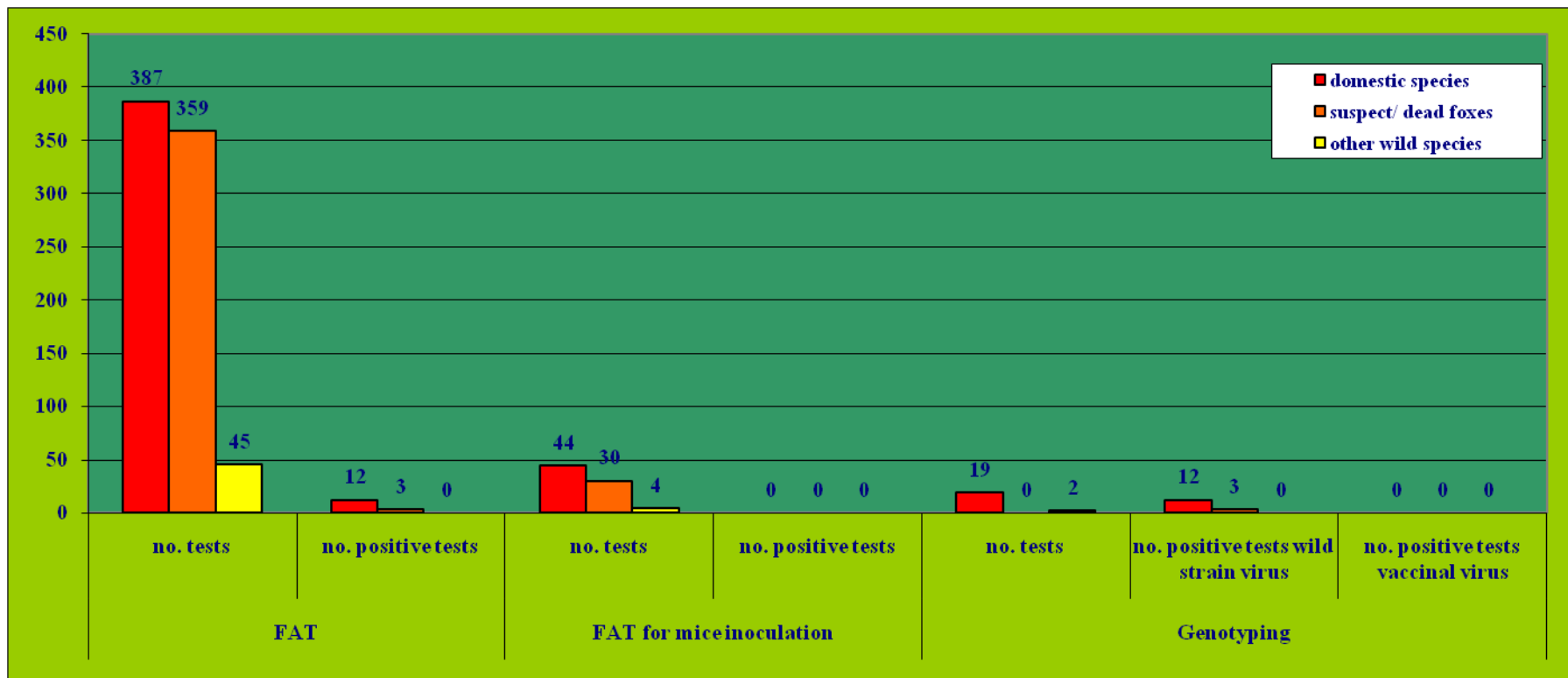
95,000 47,500 0 95,000 Meters

BULGARIA

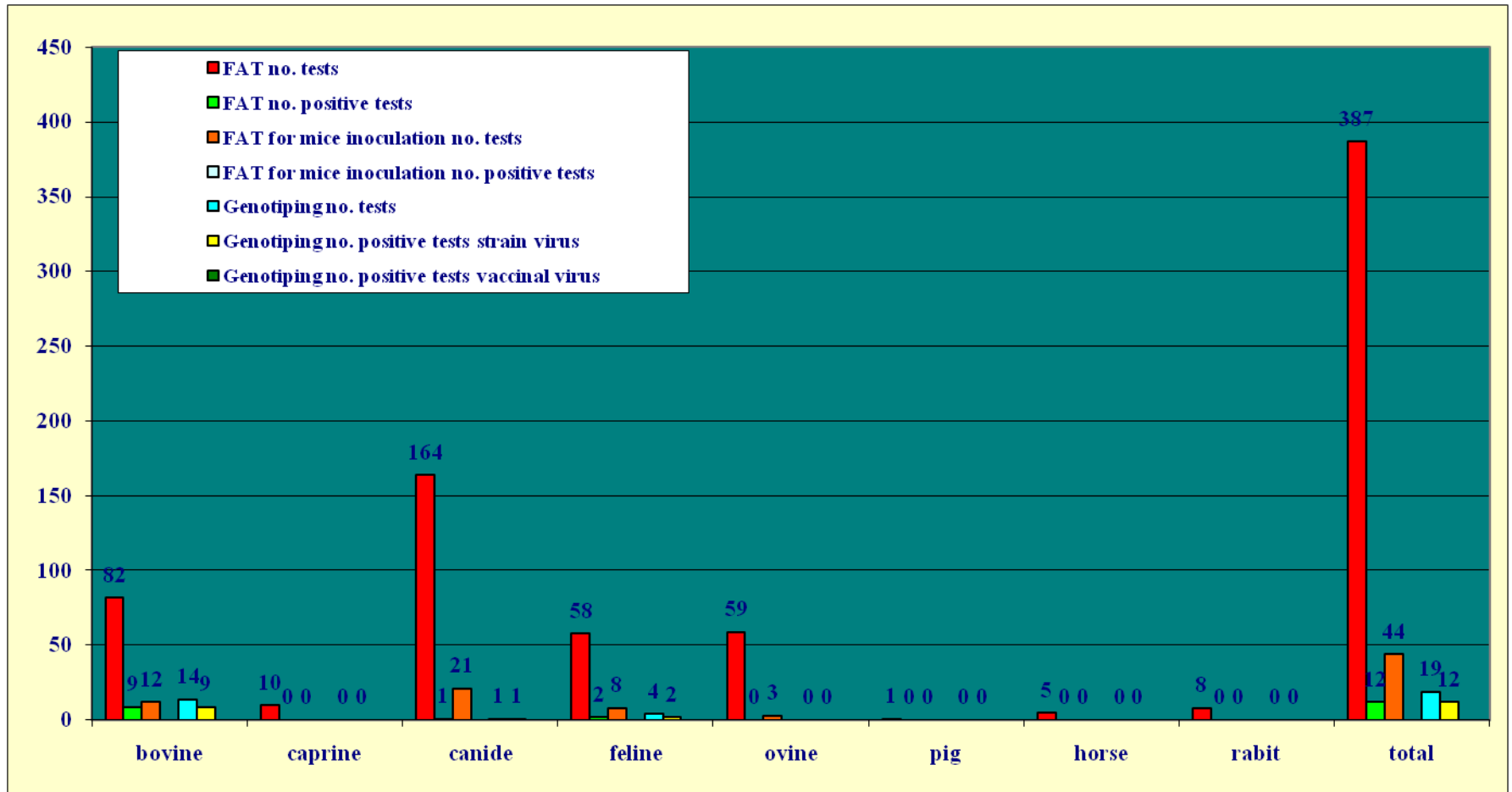
Graph No. 1 - The active surveillance of rabies in foxes – year 2016



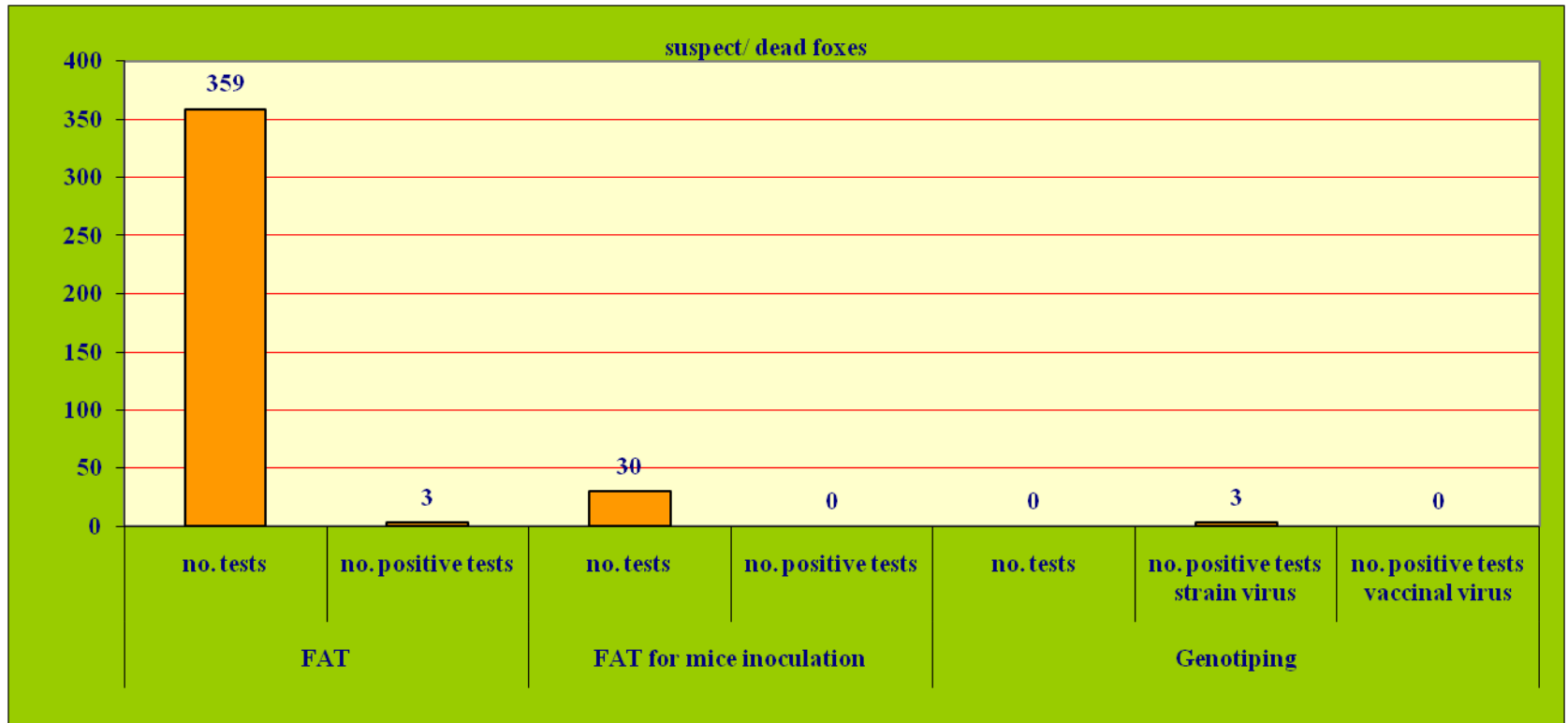
Graph No. 2 - The passive surveillance of rabies in 2016 (total)



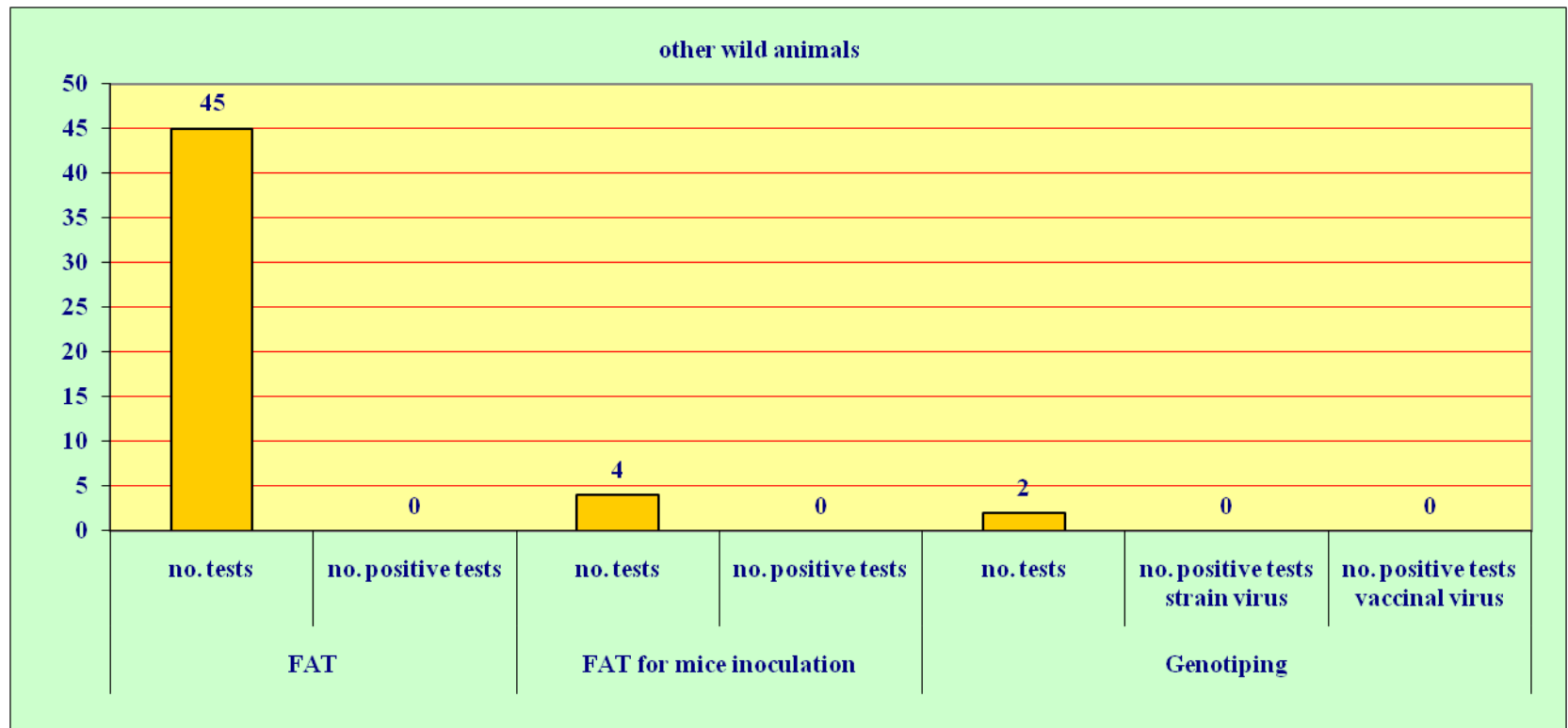
Graph No. 3 - The passive surveillance of rabies in 2016 (domestic)



Graph No. 4 – Passive surveillance of rabies in 2016 (wild foxes)



Graph No. 5 – Passive surveillance of rabies in 2016 (wild animals except foxes)





Monitoring of 2016 rabies eradication programme

- **Evaluation of vaccination efficacy**

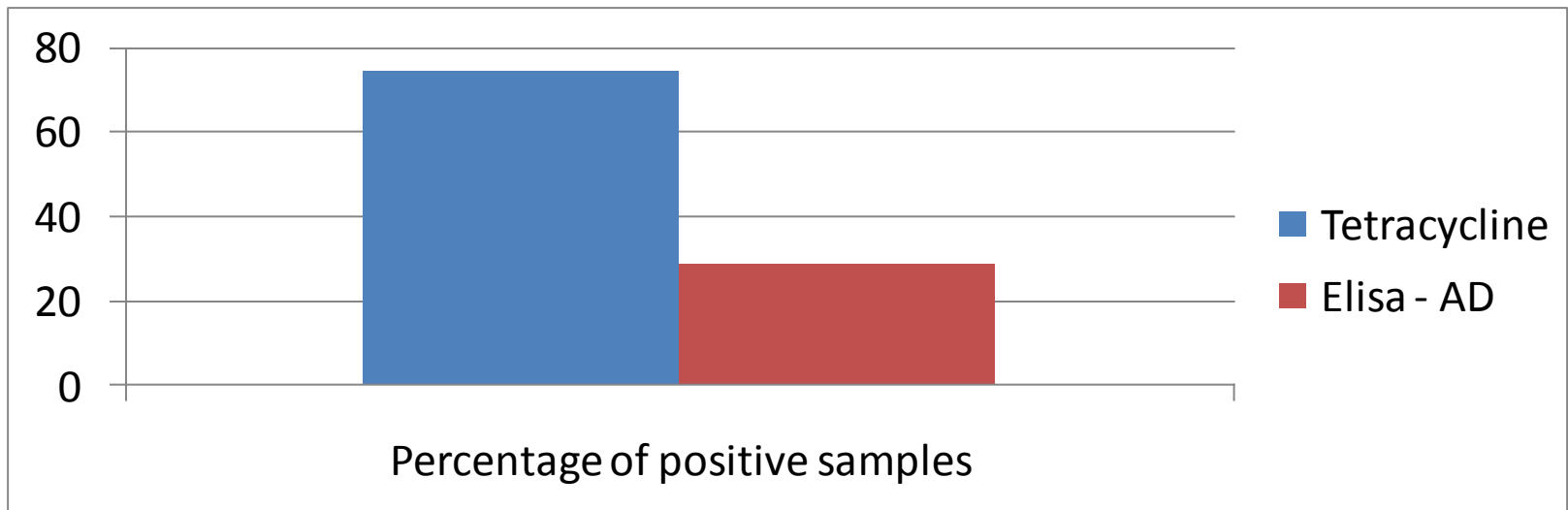
- Bait up -take - determination of bio-marker TTC :

- 7924 samples - 5211 positive and 2713 negative = **65,76 % tetracycline +**

- Detection of antibodies from thoracic liquid - Elisa:

- 7192 samples -2106 positive and 5086 negative = **29,28 % seroconversion**

- Titration of baits for suitability of the vaccine – all 27 batches tested showed that titer was into the approved level.



Claimed amount from E.U. 2016

Euro 4.215.374,11

Total cost of program 2016

Rabies Eradication

Euro 5.339.317,31

Conclusions

- higher number of foxes sampled for evaluation of vaccination efficiency in 2016 comparing with previous years (% from the programmed number): 94,29 in 2016 comparing with 85,71 in 2015, 78.21% in 2014 and 39% in 2013.
- **0 positive animals for rabies in 2017**, in 2014 – 161 outbreaks, in 2015 – 28 outbreaks, in 2016 - 14 outbreaks and in 2017 – 0 outbreaks.
- For 2018 cofinancing program extension in **Ukraine and Republic of Moldova**



I'm lucky, I'm vaccinated