



GF-TADs

GLOBAL FRAMEWORK FOR THE
PROGRESSIVE CONTROL OF
TRANSBOUNDARY ANIMAL DISEASES



**Standing Group of Experts on Rabies
in Europe**
under the GF-TADs umbrella

1st meeting (SGE RAB1)
Brussels, 13 February 2019

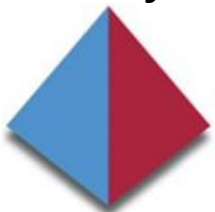
Report by
MACEDONIA

Dr. G Nikolovska, Dr. ST – Mickova, Dr B. Tabakovski

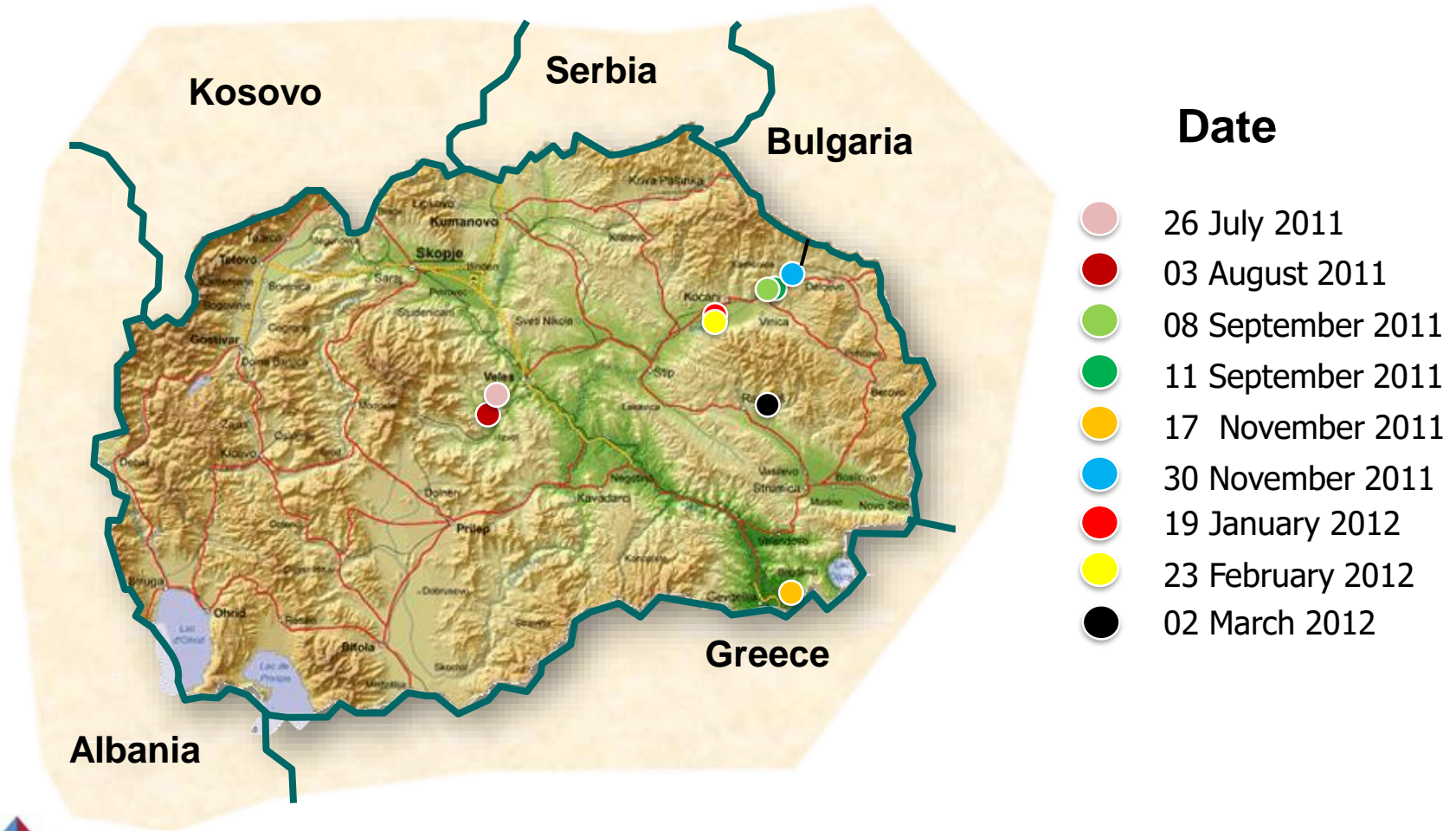
Rabies epidemiology – evolution since 2016

	2016	2017	2018	2019
Total number of indigenous cases*	Last rabies cases, March 2012	/	/	/
Species / number of cases	- Fox: - Dog: - Bovine: - ...			
Number of cases < 50 km from a neighbouring country (please detail)	4 cases from neighbouring counties			

* *If no case since 2016, date of the last indigenous case:*



Map of Rabies cases (if applicable)



Rabies epidemiology – evolution since 2016

Date	Animal species	Village	Municipality	History
26/07/2011	Fox	Stari Grad	Veles	The fox enter the backyard of the village house during the day and bite a dog. The fox (and the dog) were shot.
03/08/2011	Fox	Martolci	Veles	The fox enter the backyard of the village house during the day and bite a dog. The fox (and the dog) were shot.
08/09/2011	Wolf	Istibanja	Vinica	The wolf enter the backyard of the village house during the day and bite a dog. The wolf (and the dog) were shot.
11/09/2011	Wolf (young)	Istibanja	Vinica	The young wolf came close to the village house in the evening (not entering the backyard). The dog start to bark. The owner came out, saw the young wolf and kill it with a hey fork.
17/11/2011	Fox	Selemlji	Gevgelija	Regular monitoring for vaccination efficacy (shot during hunting)
30/11/2011	Fox	Dulica	Makedonska Kamenica	Found dead, together with one wolf, one dog and one sheep. The wolf and the dog were also investigated for rabies but were negative.
19/01/2012	Wolf	Banja	Chesinovo Oblesevo	Regular monitoring for vaccination efficacy (shot during hunting)
23/02/2012	Wolf	Glavovica	Kocani	Regular monitoring for vaccination efficacy (shot during hunting)
02/03/2012	Cat	Jargulica	Radovish	The cat bite and scratch the owners. The cat and two other animals (dog and cat in the same yard) were eutanised.



Rabies monitoring / surveillance since 2016

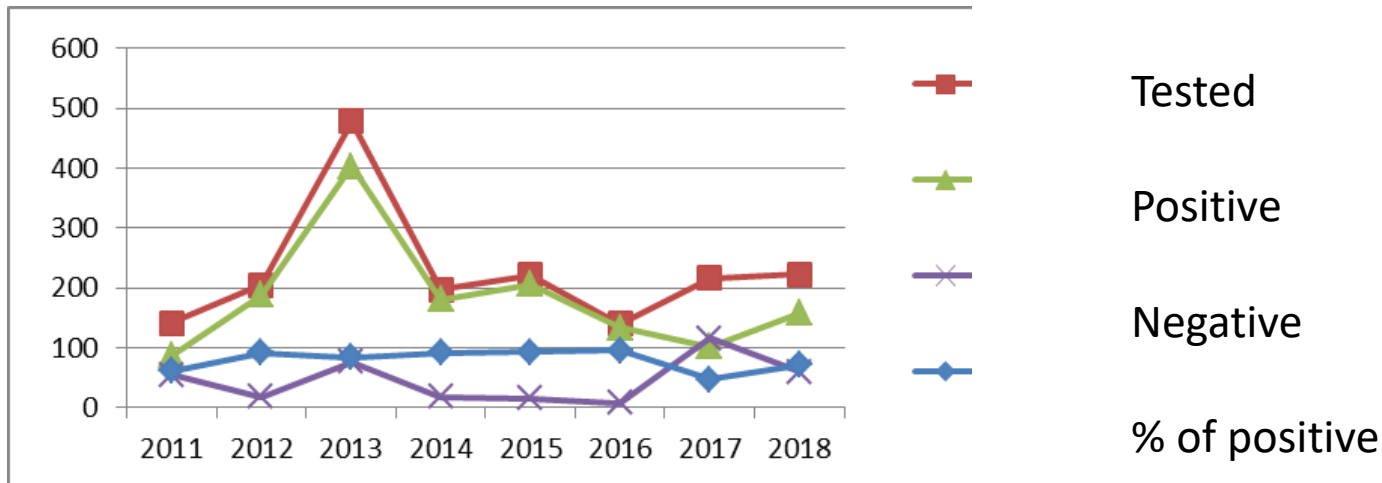
	2016	2017	2018	2019
Total number of FATS ⁽¹⁾ performed on indicator animals ⁽²⁾	5	5	2	/
Species	1 marten 1 wolf 2 dogs 1 bear	1 fox 3 wolfs 1 dog	2 foxes	/
Total number of biomarker tests and ELISA tests performed in hunted animals				

(1) FATS = fluorescent antibody test ;

(2) Indicator animals = animals that show clinical signs or abnormal behaviour suggestive of rabies, animals found dead, road kills and animals involved in human exposure

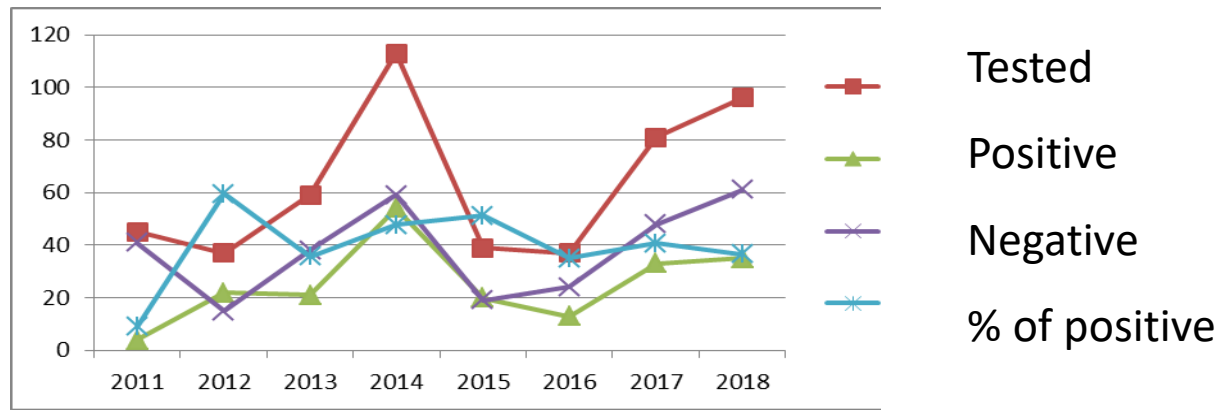
Rabies monitoring / surveillance since 2016

Year	Tested animals	Positive animals	Negative animals	% positive animals TC
2011	141	86	55	60,99
2012	205	188	17	91,7
2013	479	403	76	84,13
2014	197	181	17	91,87
2015	221	206	15	93,21
2016	140	133	7	95
2017	216	101	115	46,75
2018	222	158	59	71,17
Total:	1821	1456	361	79,95



Rabies monitoring / surveillance since 2016

Year	Tested animals	Positive	negative	% od positive animals AB
2011	45	4	41	8,9
2012	37	22	15	59,5
2013	59	21	38	35,6
2014	113	54	59	47,8
2015	39	20	19	51,3
2016	37	13	24	35,1
2017	81	33	48	40,7
2018	96	35	61	36,5
Total:	507	202	305	39,8



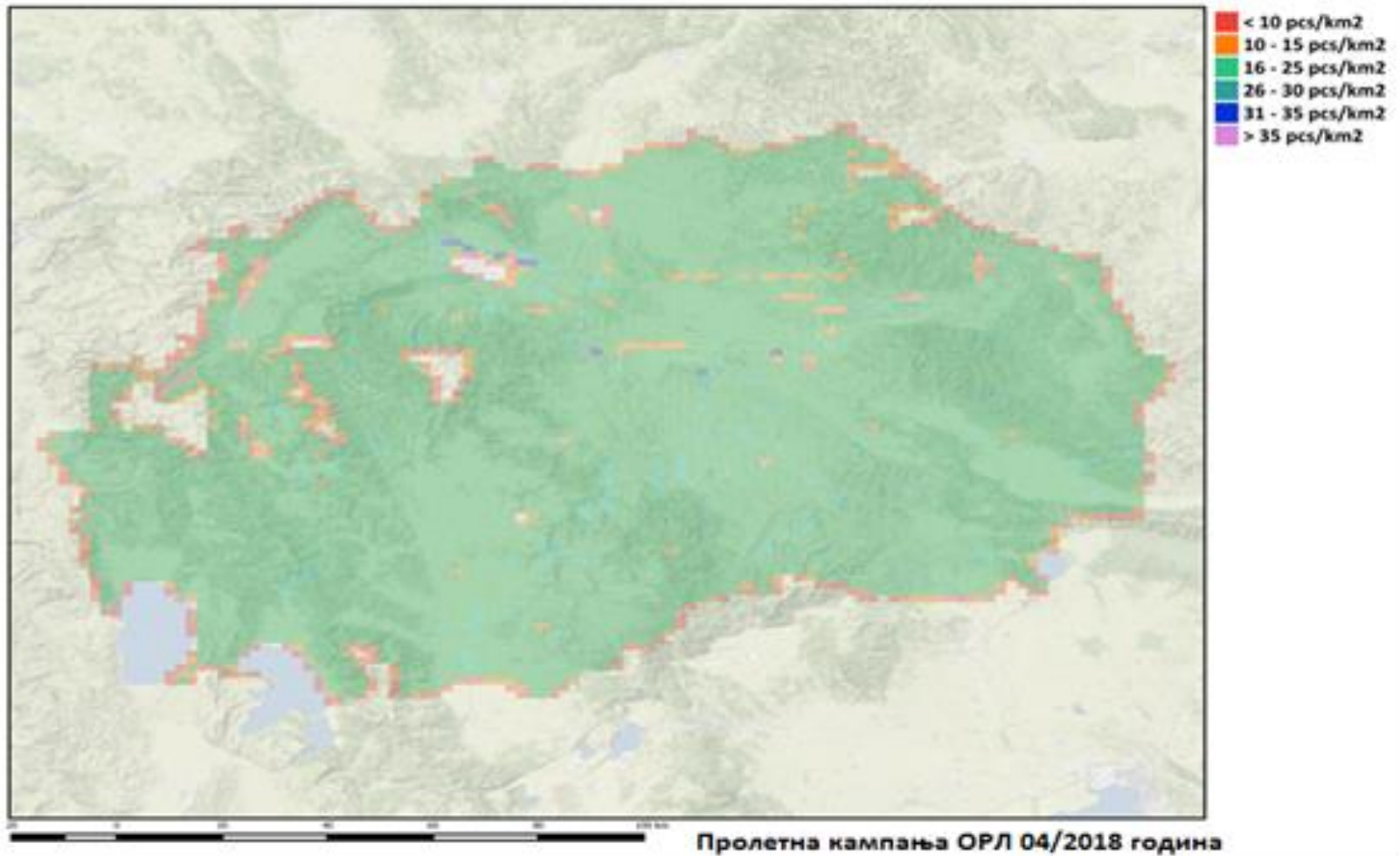
Rabies oral vaccination campaigns since 2016

	2016	2017	2018
Spring campaign	<p>Dates: <u>11 – 27 April 2016</u></p> <p><input checked="" type="checkbox"/> Whole country</p> <p><input type="checkbox"/> Parts of country and area vaccinated</p> <p>(km²):23.235 км²</p>	<p>Dates: <u>20 – 28 April 2017</u></p> <p><input checked="" type="checkbox"/> Whole country</p> <p><input type="checkbox"/> Parts of country and area vaccinated</p> <p>(km²): 23.235 км²</p>	<p>Dates: <u>10 – April 2018</u></p> <p><input checked="" type="checkbox"/> Whole country</p> <p><input type="checkbox"/> Parts of country and area vaccinated</p> <p>(km²): 23.628 км²</p>
Fall campaign	<p>Dates: <u>1-12 October 2016</u></p> <p><input type="checkbox"/> Whole country</p> <p><input type="checkbox"/> Parts of country and area vaccinated</p> <p>(km²):23.628км²</p>	<p>Dates: <u>26.10-02.11.2017</u></p> <p><input type="checkbox"/> Whole country</p> <p><input type="checkbox"/> Parts of country and area vaccinated</p> <p>(km²):23.628км²</p>	<p>Dates: <u>11 – 18 October 2018</u></p> <p><input checked="" type="checkbox"/> Whole country</p> <p><input type="checkbox"/> Parts of country and area vaccinated</p> <p>(km²):23.628км²</p>
Oral vaccin used (Raboral, Rabigen, Fuchsoral, Lysvulpen, or Other – please detail)	<p>Vaccine: Lysvulpen SAD Bern, Bioveta Czech Republic</p> <p>Bait density (baits/km²): 21 baits/km²</p>	<p>Vaccine: Lysvulpen SAD Bern, Bioveta Czech Republic</p> <p>Bait density (baits/km²): 21 baits/km²</p>	<p>Vaccine: Lysvulpen SAD Bern, Bioveta Czech Republic</p> <p>Bait density (baits/km²):21 baits/km²</p>

Rabies oral vaccination campaigns since 2016

Year	Dates of ORV campaign spring /autumn	Vaccine used	No. of baits /per km2	Vaccination area / km ²
2011	19 May - 09 June	Fuchsoral	22	21.407 km ²
	11 - 31 Oct.	SAD B19,	22	23.248 km ²
2012	Missed-delay in tendering procedure	IDT		
	19 Oct. - 03 Nov.	Biologika Germany	21	22.287 km ²
2013	04 - 28 April		22	22.186 km ²
	28 Sept. - 22 Nov.		22	23.248 km ²
2014	22 April - 06 June		21	23.218 km ²
	25 Sept. - 10 Oct.		21	23.569 km ²
2015	Missed-delay in tendering procedure	Lysvulpen		
	05-18 Nov.	SAD Bern, Bioveta	21	23.235 km ²
2016	11 – 27 April 2016	Czech	21	23.235 km ²
	1-12 Oct. 2016	Republic	22	23.235 km ²
2017	20 – 28 April 2017		22	23.569 km ²
	26 Oct. – 03 Nov. 2017		21	23.569 km ²
2018	10 - 23 April 2018		21	23.569 km ²
	26 oct. 3 nov. 2018		21	23.628 km ²

Map of Vaccination areas



Awareness Campaign



АКО СЕ СОМНЕВАТЕ, ЈАБЕТЕ СЕ НА:
0800 3222



- For better information of citizens: free phone line, web site: www.besnilo.gov.mk

Control on arrival of the vaccine

- Vaccine baits used: Fuchsoral SAD B19, IDT Biologika (2011-2014) and Lysvulpen SAD Bern, Bioveta (2015-2019)
- Titration of all vaccine batches done prior to the start of the vaccination campaign
- Vaccine boxes checked at arrival:
 - number of boxes, damaged or not
 - certificates, test results
 - temperature logs (from production date to the last date of distribution)
- Vaccines stored in a cold store (-20°C)



Control during distribution

- Inspection of aircrafts
- Inspection of automatic dropping system
- Control of flying permits
- Training Certificates for pilots
- Control of flying routes (checking of proper coverage of flying routes, altitude, etc.)
- Control of GPS system in place



Control during distribution

- Refrigerated lorry in airfields for bait storage (-20°C)
- Continuous control of cold chain
- After defrosting, vaccine must not be frozen again
- Representative of FVA constantly present at the airport (monitoring and keeping records on standard form)
- Data log transmitted from distributor (pilots) to FVA on a daily basis
- Achieved distribution plotted on maps on a daily bases (conformity with the work plan and rapid corrective measure in case of incompliance)



Specific Plans for 2019

	Spring campaign	Fall campaign
Dates - At national level	- April 2019	Not planed



- Borders:
 - 159 km with Kosovo
 - 62 km with Serbia
 - 177 km with Bulgaria
 - 262 with Greece
 - 192 km with Albania.

- Total area: 25,713 km²
 - 80% mountains
 - 20% plains



THANK YOU

