

Eradication: Final report for Rabies 2018

For each approved annual or multi-annual programme Member States shall submit to the Commission by the 30 April each year an annual detailed technical and financial report covering the previous year. That report shall include the results achieved and a detailed account of eligible costs incurred (Art 14 of Regulation (EU) No 652/2014).

This form is for information only, no submission possible.

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Reporting period

From: 2018

To: 2020

Year of implementation: 2018

1. Technical implementation of the programme

1.1 Description and evaluation of the evolution of the epidemiological situation, the technical implementation of the activities foreseen under the programme and the cost-effectiveness of the programme.

Following the notification of a red fox rabies case by North Macedonia (ex-FYROM) authorities in the Selemlı region, just 300 m from the Northern Greek borders, in November 2011, a pre-existing national program for rabies passive surveillance according to Directive 99/2003/EC (imposing the collection and examination of wild and domestic animals found dead or suspected of having rabies) was enhanced in 16 prefectures along the northern and eastern land borders of Greece.

The last rabies case in Greece had been detected in Evros R.U. in 1987. In October 2012, a new rabies case was confirmed in a red fox (*Vulpes vulpes*) in Kozani Regional Unit in West Macedonia Region, in the Northern Greece, causing the end of a total of 25 years of rabies-free health status in Greece.

By the end of 2012 nine positive cases (seven red foxes and two dogs all located at the four Regional Units in the northern and eastern land borders of Greece) were confirmed by the National Reference Laboratory for rabies.

In 2013, following the identification of the infected fox, the collection of samples from dead and suspect for rabies animals was expanded to the whole country aiming mainly to achieve a more efficient surveillance of the disease. In the frame of constant surveillance performed since then, a total of 48 rabid animals were confirmed by the National Reference Laboratory for Rabies in animals (NRL), which is the Virology Laboratory in Athens Veterinary Center. Precisely, nine (7 foxes, 2 dogs), twenty nine (25 foxes, 1 dog, 1 cat, 2 cattle) and ten (8 foxes, 2 dogs) animal rabies cases were laboratory confirmed in 2012, 2013 and

2014 respectively, whereas the last rabies case was confirmed in a red fox in Pella Regional Unit in May 2014. All these samples submitted to the National Reference Lab were tested by the fluorescent antibody test (FAT), Real time RT-PCR, conventional RT-PCR, sequencing and bioinformatics. Since then no new cases have been recorded.

The immunization of wildlife via oral vaccination campaigns is regarded as one of the basic pillars of the Rabies Eradication Programme.

After the outbreak and with the support of the EU, an Oral Vaccination programme for the immunization of red foxes against rabies was launched in Greece. The first vaccination campaign took place in autumn/winter 2013, the second in autumn/winter 2014, the third in autumn/winter 2015, the 4th in spring 2016, the 5th in autumn 2016, the 6th and 7th ORV campaigns in spring and autumn 2017, the 8th and 9th campaigns in spring and autumn 2018 respectively.

While the specific vaccine selected for both 2017 (spring and autumn) oral vaccination campaigns in Greece was the SAG2 vaccine (RABIGEN® SAG2) (as used during the previous campaigns), the vaccine selected for 2018 (spring and autumn) oral vaccination campaigns and also for 2019 (10th and 11th ORV) in Greece is the Lysvulpen, BIOVETA (SAD Bern vaccine) after a three-year (2018-2020) framework contract co-signed by the Ministry of Rural Development and Food and the producer company. The total number of vaccines that we had available for both spring and autumn campaigns 2018 were 2.980.200 vaccine baits. The Regional Units involved in the program for both campaigns in 2018 were the following: Thessaloniki, Kilkis, Pella, Pieria, Imathia, Kozani, Kastoria, Florina, Ioannina, Preveza (part), Arta, Aetolia Acarnania (part), Evritania (part), Larisa, Karditsa, Trikala, Evros, Xanthi, Rodopi, Kavala, Drama, Serres, Chalkidiki, Grevena.

The initial estimation of the number of vaccines needed for the two 2018 campaigns has been based on the calculation initially performed by the surveyor of the Ministry taking into account the area that should be covered, excluding urban and suburban areas, lakes and big roads. The co-estimation about the previous campaigns conducted has shown that although there is a variation in the conduction of the campaigns, the number of vaccines estimated and ordered annually is a number that ensures the adequacy that is efficient for the distribution agreed under the tender requirements.

Changes in the flight paths and distribution densities in each campaign may affect in some way both the final size of the vaccinated area and the number of vaccines required and this is the reason why we need to have more vaccines available initially. According to our tender requirements the company should distribute on average 25 baits / km², but no less than 20 baits/km².

Vaccine-baits were aerielly distributed by fixed-wind aircrafts, in the 24 regional units of the country, as was initially planned. Vaccines were dropped along parallel flight paths 500 m apart from each other, in order to optimize aerial dropping and achieve homogeneous distribution. The whole dropping process has been conducted and monitored using a special automatic device equipped with GPS receiver, provided by the baits manufacturer (BIOVETA, SA). This equipment was installed in each aircraft, registering the dropping coordinates of each bait sending the records "real-time" both to the competent authority and the aerial distribution company. The whole procedure was supervised by Official Veterinarians of the Regional Units involved in the campaigns.

The three-year framework contract, co-signed by the Ministry of Rural Development and Food and the Vaccine-baits producer company as well as the aerial distribution company secured the availability and the normal supply of vaccine-baits for 2018 and the next 2 years (2019-2020), while maintaining and ensuring fixed prices for the goods and services supplied.

In order to increase the number of animals collected, the Competent Authority has increased the remuneration of the hunters for each animal hunted (from 30 to 50 EUROS), since January 1st 2017. During the 2018 summer period, we co-operated along with the competent Ministry of Environment in order to modify some points of the program's strategy, by increasing the number of hunting missions performed, and in the same time raising their effectiveness.

It should be mentioned that the hunting period starts in Greece late in August and lasts until the end of February, a fact that affects the number of foxes delivered for analysis at the laboratory outside that period. Up to day and in the framework of the spring campaign, foxes have been collected only by forestry officers, game keepers and hunters and these missions were organized by the forestry services specifically for this purpose.

Weather conditions affect ORV implementation, especially by its variability.

SPRING 2018 CAMPAIGN

The spring 2018 campaign started on 02.04.2018 and lasted until 26.04.2018

The Lysvulpen vaccine was used for the first time in Greece and is scheduled to be used also for the autumn 2018 campaign. The total number of vaccines ordered for the spring 2018 campaign was 1.490.100 baits.

The producer company, BIOVETA, A.S. informed us, in written, that in each of the 2129 boxes dispatched they had included 5 or 6 baits plus, approximately. For this reason the estimated range of the baits available has been between 1.500.745 and 1.502.874. It is worth mentioning that BIOVETA, A.S. claims compensation for only the 1.490.100 baits that were initially agreed to deliver within the CCA.

The area of vaccination for the spring of 2018 is the same as in 2017 campaigns.

The Regional Units covered by the program for the spring 2018 campaign were the following: Thessaloniki, Kilkis, Pella, Pieria, Imathia, Kozani, Kastoria, Florina (part), Ioannina, Preveza (part), Arta, Aetolia acarnania

(part), Evritania (part), Larisa, Karditsa, Trikala, Evros, Xanti, Rodopi, Kavala, Drama, Serres, Chalkidiki, Grevena.

The vaccinated area covered extended to 54823km².

A communication campaign (posters and leaflets, TV spot, special educational material and courses for children in schools) has been launched following all the previous campaigns.

The number of baits available for distribution was 110 baits less than those delivered in Greece (for sampling and titration purposes before aerial distribution).

-60 samples (40 sent to the EURL immediately for titration and 20 remained into the fridge and then were sent to the EURL later on),

-10 baits remained to the airfield for a few days before been sent to the EURL for titration

-40 counter samples were stored in the fridge on the Greek NRL.

According to current national legislation and tender requirements, the cost regarding the qualitative control (titration) of vaccines is totally undertaken by the contractor.

The total number of baits aerially distributed was 1.501.844, within the estimated range.

A number of 812 vaccine baits have been recorded to be released outside country's continental territory. It seems to have been recorded during aircraft turns beyond areas that share borders with sea.

In addition, a number of 2002 baits have been distributed outside the vaccination area. During the air drops, it was not possible for the aircraft responsible for baits distribution, to avoid dropping of baits in the areas of Fthiotida, Magnisia and Thesprotia when flying in areas which were involved in the vaccination program and shared the same borders with the above regional units.

The higher number of vaccine-baits in total was distributed in Larisa Regional Unit (138.547 vaccines).

The vaccines manufacturer delivered successfully all the quantities of vaccines in one shipment, to the Ministry of Rural Development and Food. Samples of the vaccines were sent for analysis to the EURL and the results of the qualitative tests obtained were satisfactory.

The evaluation of the bait distribution densities for the spring 2018 ORV campaign as illustrated on the map of each vaccinated regional unit has been performed with the collaboration of our Service and the Topography Service of the Ministry, and in total, the distribution can be considered satisfactory. (Attached File named 2018 SPRING COVERAGE.pdf).

Monitoring the effectiveness of 2018 spring ORV campaign

The monitoring period for assessing the effectiveness of spring 2018 ORV campaign started -depending on the Regional Unit- on May 2018 or June 2018 and was extended up to 30 September 2018 just before the initiation of the autumn 2018 campaign).

Following spring 2018 campaign and for the needs of the monitoring programme, during the period May-September 2018, samples derived by 211 hunted foxes have been delivered to the NRL. A circular was distributed in summer 2018 in game keepers, hunters and forestry officers as well as in regional veterinary authorities referring to the need for the increase of the collection of hunted animals, underlying the importance of adult animal collection instead of juveniles. However, it was decided at central level that if the delivery of juvenile animals was totally discouraged (for example, without providing remuneration for these animals), then the targets achieved would be much lower than these set.

The results obtained following the analysis of samples of monitoring the spring 2018 campaign, could be summarized as follows:

Seroconversion

While total number of samples appropriate for seroconversion counted 185, 78 of them originated from adult animals and the rest (107) from juveniles. As far as the total number of animals collected is concerned, 89 of them (48.11%) tested seronegative and 96 of them (51.89%) seropositive. So, among samples derived by juvenile population, 69 (64.49%) were negative and 38 (35,51%) were positive. Among samples derived by adult population, 20 (25.64%) were negative, while 58 out of 78 blood samples were seropositive (74.36%) .

TTC detection

Regarding the detection of TTC line in animal's teeth (TTC intake not depending on the ORV campaign), 33 out of 131 samples derived by juvenilles (25.19%) was positive.

In samples obtained by adult animals, all 80 samples delivered for analysis (100%) showed TTC intake.

The results are also illustrated in graphs, in the attached file named Monitoring Results following spring 2018 campaign.

Low TTC uptake rates for the monitoring (Spring 2018 campaign) in young animals, may be attributed to the fact that during the period of vaccination (spring 2018 campaign /April- May 2018) the young foxes that were further hunted for testing were still cubs, so there was little possibility to receive the baits-vaccines. Even if they could have found the baits-vaccines, they would not be able to bite or chew the hard casing of the vaccine (bait containing TTC) due to their young age.

Due to the same reasons, even if young animals had found the baits, they could not bite the bait in order to break the capsule containing the liquid vaccine. The above may have contributed to the low seropositivity rates mainly on the young fox population tested.

An additional reason that may account for the low seropositivity in juveniles, is the fact that when young animals would be capable for finding the baits (following their exit out of their dens) the baits would have remained in the environment for a quite prolonged period and under high temperatures (summer 2018), conditions resulting in a diminished effectiveness of the vaccine.

On the other hand, we can see a differentiated response in adult animals when compared to juveniles. Seropositivity is considered quite satisfactory, while in the majority of adult animals tested, TTC lines have been detected (indicating the intake of the bait). Similar results had been also obtained following the previous year- 2017- Spring campaign. Our goal is to promote the collection of adult animals and this is underlined in circulars distributed to every party involved.

AUTUMN 2018 CAMPAIGN

The producer company of the vaccines delivered all the vaccine quantity in one delivery. Thus, samples from all main batches were taken and sent to the EURL for titration at the beginning of the programme, while bait samples from 3 batches remained at the cold facilities where baits were stored until their last delivery to the airfields. Regarding temperature conditions, except the controls made on the registers of the store facilities official veterinarians who monitored the loading of vaccines used calibrated thermometers to record the temperature in the vaccine storage areas. In addition, veterinarians from the Regional Unit of Piraeus, on the written request of the Central Competent Authority (Department of Zoonoses), carried out an unannounced inspection in the cold stores where the vaccines were kept and sent their findings in writing to the Central Competent Authority. In all cases the conditions considered accepted with the ones required for storing the vaccine on the basis of the relevant SPC.

The autumn 2018 campaign started on the 3rd of October and lasted till the 7th of November.

The co-signed framework contract with the vaccine producer and the aerial distribution company as well, has secured timely delivery of the agreed vaccine number.

The Lysvulpen vaccine was used for the autumn 2018 campaign. The total number of vaccines ordered for the autumn 2018 campaign was 1.490.100 baits.

The producer company, BIOVETA, A.S. informed us, in written, that in each of the 2129 boxes dispatched they had included 0,3-1% baits plus, approximately. For this reason the estimated range of the baits available has been between 1.494.570 and 1.505.001. It is worth mentioning that BIOVETA, A.S. claims compensation for only the 1.490.100 baits that were initially agreed to deliver within the CCA.

The area of vaccination for the spring of 2018 is the same as in 2017 campaigns.

The Regional Units covered by the program for the spring 2018 campaign were the following: Thessaloniki, Kilkis, Pella, Pieria, Imathia, Kozani, Kastoria, Florina (part), Ioannina, Preveza (part), Arta, Aetolia acarnania (part), Evritania (part), Larisa, Karditsa, Trikala, Evros, Xanti, Rodopi, Kavala, Drama, Serres, Chalkidiki, Grevena.

The vaccinated area covered extended to 54962 km.

A communication campaign (posters and leaflets, TV spot, special educational material and courses for children in schools) has been launched following all the previous campaigns.

The number of baits available for distribution was 110 baits less than those delivered in Greece (for sampling and titration purposes before aerial distribution).

-60 samples (40 sent to the EURL immediately for titration and 20 remained into the fridge and then were sent to the EURL later on),

-10 baits remained to the airfield for a few days before been sent to the EURL for titration.

-40 counter samples were stored in the fridge on the Greek NRL.

According to current national legislation and tender requirements, the cost regarding the qualitative control (titration) of vaccines is totally undertaken by the contractor.

The total number of baits aerially distributed was 1.496.755, within the estimated range.

In addition, a number of 1679 baits have been distributed outside the vaccination area. During the air drops, it was not possible for the aircraft responsible for baits distribution, to avoid dropping of baits in the areas of Fthiotida, Magnisia and Thesprotia and beyond the borders, when flying in areas which were involved in the vaccination program and shared the same borders with the above regional units.

A number of 776 vaccine baits have been recorded to be released outside country's continental territory. It seems to have been recorded during aircraft turns beyond districts that share borders with sea.

The higher number of vaccine-baits in total was distributed in Larisa Regional Unit (137104 vaccines).

The results of the vaccines samples qualitative tests performed by the EURL were accepted.

The evaluation of the baits distribution densities for the autumn 2018 ORV campaign as illustrated on the map of each vaccinated regional unit has been performed with the collaboration of our Service and the Topography Service of the Ministry, and in total, the distribution can be considered satisfactory. (Attached File named 2018 AUTUMN COVERAGE.pdf).

The monitoring period for assessing the effectiveness of autumn 2018 ORV campaign started -depending on the Regional Unit- on November 2018 and has been expanded up to 30 March 2018, just before the initiation of the spring 2019 campaign.

Monitoring the effectiveness of ORV 2018 autumn campaign

The monitoring period for assessing the effectiveness of autumn 2018 ORV campaign started in November-December 2018 -depending on the Regional Unit- and was extended up to 31 March 2019, just before the initiation of the spring 2019 campaign).

Following autumn 2018 campaign and for the needs of the monitoring programme, samples derived by 259 hunted foxes were delivered to the NRL until 17.4.2019. The analyzed samples until today derive by 100 foxes. The remaining samples are in process of analysis and the results obtained will be provided in the following period.

TTC detection

Regarding the detection of TTC line in animal's teeth (TTC intake not depending on the ORV campaign), 50 out of 60 samples derived by juveniles (83.3%) was positive.

In samples obtained by adult animals, 38 out of 39 samples delivered for analysis (97.43%) showed TTC uptake.

The results are also illustrated in graphs, in the attached file named Monitoring Results following spring 2018 campaign.

Results by the samples that have been already analyzed:

Seroconversion

Total number of samples appropriate for seroconversion counted 76, 29 of them originated from adult animals and the rest (47) from juveniles.

As far as the total number of animals collected is concerned, 23 of them (30.26%) tested seronegative and 53 of them (69.73%) seropositive.

Among samples derived by juveniles, 28 out of 47 blood samples tested, were seropositive (59.57%) and 19 (40.42%) were negative. Among samples derived by adult animals, 25 out of 29 blood samples (86.21%) were seropositive while 4 out of 29 blood samples were negative (13.79%).

TTC detection

Regarding the detection of TTC line in animals' teeth (intake of the campaign non depending on the ORV campaign of intake), 50 out of 60 samples by juveniles (83.33%) were positive.

In samples obtained by adult animals, 38 out of 39 teeth samples tested, showed TTC uptake (97.44%).

A reminder circular has been distributed again in game keepers, hunters and forestry officers as well as in regional veterinary authorities mentioning the importance of collection of adult foxes instead of juveniles.

Monitoring the effectiveness of ORV 2017 autumn campaign

The monitoring period for assessing the effectiveness of autumn 2017 ORV campaign started in November-December 2017 -depending on the Regional Unit- and was extended up to 31 March 2018, (just before the initiation of the spring 2018 campaign). Thus, the final results excluded later on, after the submission of the 2017 final report on April 2018. These final monitoring results for ORV 2017 autumn campaign are described here under:

While total number of samples appropriate for seroconversion counted 286, 173 of them originated from adult animals and the rest (113) from juveniles. As far as the total number of animals collected is concerned, 54 of them (18.88%) tested seronegative and 232 of them (81,12%) seropositive. So, among samples derived by juvenile population, 30 (26,55%) were negative and 83 (73,45%) were positive. Among samples derived by adult population, 24 (13,87%) were negative, while 149 out of 173 blood samples were seropositive (86,13%) .

TTC detection

Regarding the detection of TTC line in animal's teeth (TTC intake not depending on the ORV campaign), 98 out of 122 samples derived by juveniles (80,33%) were positive.

Regarding adult population, 181 out of 187 samples delivered for analysis (96,79%) showed TTC uptake.

The results are also illustrated in graphs, in the attached file named Monitoring Results following autumn 2017 campaign.

Organization of the next vaccination campaigns

The spring 2019 campaign is in progress and will be completed in mid May 2019. The autumn 2019 campaign is scheduled to take place in October-November 2019.

Cost effectiveness of the programme

The oral vaccination campaigns conducted for a period of years in Greece, together with the other countries of the South Eastern borders of Europe and the surveillance performed thereby, seem to have effectively immunized wildlife population, as no new rabies case has been detected since 2014. During the GF-TAD's Rabies meeting in Brussels, in February 2019, the intergovernmental cooperation of the South Eastern countries was encouraged and enhanced. Therefore, it could be suggested that the absence of any other sample positive in rabies, since May 2014, is related both to the wildlife immunization in the country as well as the respective ORV vaccination programs conducted in countries sharing borders with Greece. The significant sampling increase in the frame of Passive Surveillance from 2016 (especially in the second semester) and the improved surveillance in years 2017 and 2018, provide us the opportunity to conclude more accurately that in Regional Units whereas surveillance is really enhanced (Grevena, Serres, Pieria etc) rabies virus is most likely not circulating undetected. However, we cannot reach to the same conclusions for Regional Units with a limited number of samples in the frame of passive surveillance.

In general, we may assume that the situation is being improved. In the following years the implementation of ORV campaigns as well as further improvement in the sampling size of Passive surveillance in areas where still remains low, may contribute to the regain of the free rabies health status of the country and respectively the reduction of the expenditure related to the control of the disease (costs related to the Rabies control Program in animals as well as the costs needed in the human sector (PEP prophylaxis etc). According to the epidemiological data in our country and in other neighboring countries, the extent of the area of vaccination may be reconsidered (e.g. only for high risk areas only). In the frame of the 1st GF-TAD's Rabies meeting during February, the cooperation of the South-East European countries was encouraged as a prerequisite for further efficacy and achievements.

In addition, the 3-year framework contract co-signed between the Greek Ministry of Rural Development and

Food, the Vaccine-baits producer company and the aerial distribution company reassures the availability and the normal supply of vaccine-baits for the next 2 years (2019-2020), while maintaining and ensuring fixed prices for the goods and services supplied.

Comments related to the Table "FINANCIAL DATA - REIMBURSEMENT CLAIM"

** The costs for the remuneration of hunters and game keepers relate to the samples delivered to the competent veterinary authorities both late in 2017 (but were not paid in 2017 and were not reported as costs in the final report for 2017) but also costs paid during 2018. During the second semester 2018 additional samples have been delivered to the veterinary authorities; however financial requests are not yet available for these samples.

*** The FAT, ELISA, TTC analysis and other tests include the number of tests performed (not corresponding only to the number of samples collected, but include also the repeat tests). Regarding the other tests we include molecular techniques (REAL-TIME RT-PCR) and (RT-PCR). Since June 2018, in Real-Time RT-PCR assay for the detection of lyssavirus-derived ribonucleic acid (RNA), we included a separate real-time RT-PCR assay for the amplification of the internal housekeeping control gene of beta actin as an internal control for RNA extraction, which increases the cost of the assay from 25 to 35 euro per sample.

In detail,

1. The 1435 FAT tests correspond to:

- a) 896 tests PASSIVE surveillance 2018
- b) 74 repeat tests PASSIVE surveillance 2018
- c) 109 FAT tests (derived by the monitoring programme following the autumn 2017 campaign and were not included in the final 2017 report)
- d) 7 FAT repeat tests (derived by the monitoring programme following the autumn 2017 campaign)
- e) 208 FAT tests (derived by the monitoring programme following the spring 2018 campaign)
- f) 5 FAT repeat tests (derived by the monitoring programme following the spring 2018 campaign)
- g) 96 FAT tests (derived by the monitoring programme following the autumn 2018 campaign)
- g) 40 FAT tests for the need of Ring test

2. The 459 ELISA tests CORRESPOND TO:

- a) 110 tests (derived by the monitoring programme following the Autumn 2017 campaign and the analyses were performed in 2018 and were not included in the final 2017 report)
- b) 40 repeat tests (derived by the monitoring programme following the Autumn 2017 campaign and the analyses were performed in 2018 and were not included in the final 2017 report)
- c) 203 tests (derived by the monitoring programme following the spring 2018 campaign)
- d) 6 repeat tests (derived by the monitoring programme following the spring 2018 campaign)
- e) 83 tests (derived by the monitoring programme following the autumn 2018 campaign)
- f) 17 repeat tests (derived by the monitoring programme following the autumn 2018 campaign)

3. The 442 TTC tests correspond to:

- a) 110 tests (derived by the monitoring programme following the autumn 2017 campaign and the analyses were performed in 2018)
- b) 7 repeat tests (derived by the monitoring programme following the autumn 2017 campaign and the analyses were performed in 2018)
- c) 211 tests (derived by the monitoring programme following the spring 2018 campaign)
- d) 13 repeat tests (derived by the monitoring programme following the spring 2018 campaign)
- e) 99 tests (derived by the monitoring programme following the autumn 2018 campaign)
- f) 2 repeat tests (derived by the monitoring programme following the autumn 2018 campaign)

4. The 316 other tests correspond to:

- a) 268 REAL-TIME RT-PCR tests performed in the frame of passive surveillance.
- b) 6 REAL-TIME RT-PCR tests (derived by the monitoring programme following the autumn 2017 campaign and the analyses were performed in 2018).
- c) 20 REAL-TIME RT-PCR tests (derived by the monitoring programme following the spring 2018 campaign)
- d) 8 REAL-TIME RT-PCR tests (derived by the monitoring programme following the autumn 2018 campaign)
- e) 14 RT-PCR tests performed in the frame of passive surveillance.

1.2 Details on the level of achievement of the targets set in the approved programme and technical difficulties.

Passive surveillance

896 brain samples from animals (dead, suspect for rabies, related to human exposures) were delivered to the NRL in 2018. All these samples are negative for rabies virus. The number of samples is increased compared to the number of samples collected during the previous years and this is justified by the remuneration provided for red foxes delivered and the awareness campaign performed as well.

It is very important that an increase was recorded starting from 2017 when for the first time the 50 EURO remuneration per dead fox delivered, was provided.

Although in total the number of samples collected is considered quite satisfactory, an important issue that we cannot yet overcome is that sampling still remains not homogenous among all regional units in the country. As it is shown from the attached MAP, (named SURVEILLANCE-PASSIVE 2018.pdf), illustrating with different colors the level of passive surveillance in regional units, and the attached diagram, named

Surveillance Rabies Greece 2018.docx, we conclude that passive surveillance rates are better than previous years, with an improvement shown in areas in close proximity to Turkey. In order to improve the awareness and cooperation of all the programme stakeholders, we are preparing new posters and leaflets and a new video for the need of enhancing passive surveillance. A video describing the process of sampling a dead fox has been created and distributed to magazines and newspapers addressed to hunters. Animal Health Directorate is conducting actions for the production of new informative material for Rabies (leaflets, posters and video). However this procedure has not yet been finalized so the respective costs are not included in 2018 final report. Finally, before the start of the autumn campaign a meeting took place in Thessaloniki among the CCA and representatives from the Veterinary officers of the Regional Units.

Monitoring the effectiveness of ORV campaigns in 2018.

Evaluation of the annual monitoring programme following the 2018 spring and autumn ORV campaigns

Assessing monitoring results for 2018 in total (independent of the vaccination period and taking into account that 1/3 (approximately) of samples collected following autumn 2018 have not been analyzed yet and are not included in this assessment), we have got the following results:

Seroconversion

Among samples derived by juveniles, 66 out of 154 (42.85%) blood samples tested, were seropositive. Among samples derived by adult animals, 83 out of 107 blood samples (77.57%) were seropositive.

TTC detection

Regarding the detection of TTC line in animals' teeth, 83 out of 191 samples by juveniles (43.45%) were positive. In samples obtained by adult animals, 118 out of 119 teeth samples tested, showed TTC uptake (99.15%).

In total, evaluating the above results, we can conclude that TTC uptake is considered very good, especially in adult animals, and this indicates a good level of vaccine uptake by the target animals. Regarding, the immunization rates following the ORV, the results obtained are quite satisfactory for the adult foxes tested, while these levels are lower for the younger animals (in accordance to the results obtained for TTC detection).

As for the previous years, the recommended sample size of a minimum of 4 foxes/100 km² per year, was difficult to achieve, due to many reasons: patchy geomorphologic relief, prohibition of ridged guns and scopes (by law), and the fact that fox hunting is not common in Greece thus the lack of experience by the greek hunters, does not facilitate the fox hunting procedure. Hunting federations declare that even if many missions are being performed, it is really difficult to find, shoot and finally hunt a fox.

A different responsiveness of hunters among different Regional Units is recorded, even if these areas are in close proximity (in the same Region for example) and even if the same awareness campaigns have been performed.

Enhancing surveillance still remains a target to achieve.

1.3 Epidemiological maps for infection and other relevant data on the disease/activities (information on serotypes involved,...) (Please attach files of data using the PDF attachment feature) Use the textbox below to provide clarifications for the maps you attach, if needed.

- Monitoring Results following Autumn 2017 Campaign.docx (Monitoring Results for the whole Autumn 2017 Campaign sampling)
- Monitoring Results following Autumn 2018 Campaign.docx (Monitoring Results for Autumn 2018 Campaign (samples 1-100))
- Monitoring Results following Spring 2018 Campaign.docx (Monitoring Results for the whole Spring 2018 Campaign sampling)
- Surveillance Rabies Greece 2018.docx (A diagram for 2018 passive surveillance per Regional Unit)
- SURVEILLANCE-PASSIVE 2018.pdf (A map with passive surveillance for 2018)

ANNEX VI TECHNICAL REPORT ON RABIES PROGRAMMES

VERY IMPORTANT: Please fill out the following tables with figures corresponding to measures performed during the implementing period (1/1 to 31/12).

Table A1 - TEST FOR THE MONITORING OF VACCINATION EFFECTIVENESS

Region	Species and age	Type of test	Test description	Number of tests	Number positive	% positive
Serres (Spring 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	8	0	0 %

Serres (Spring 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	9	3	33.33 %
Kilkis (Spring 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	1	1	100 %
Kilkis (Spring 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	1	1	100 %
Kilkis (Spring 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	1	0	0 %
Kilkis (Spring 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	1	1	100 %
Larisa (Spring 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	16	11	68.75 %
Larisa (Spring 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	6	6	100 %
Larisa (Spring 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	16	4	25 %
Larisa (Spring 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	6	6	100 %
Karditsa (Spring 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	3	3	100 %
Karditsa (Spring 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	1	1	100 %
Karditsa (Spring 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	5	0	0 %
Karditsa (Spring 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	2	2	100 %
Kastoria (Spring 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	7	5	71.43 %
Kastoria (Spring 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	8	7	87.5 %
Kastoria (Spring 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	7	3	42.86 %
Kastoria (Spring 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	8	8	100 %
Pieria (Spring 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	23	2	8.7 %
Pieria (Spring 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	10	8	80 %
Pieria (Spring 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	23	2	8.7 %
Pieria (Spring 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	10	10	100 %
Grevena (Spring 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	1	0	0 %
Grevena (Spring 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	1	1	100 %
Thessaloniki (Spring 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	1	1	100 %
Thessaloniki (Spring 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	1	1	100 %
Trikala (Spring 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	27	1	3.7 %
Trikala (Spring 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	36	20	55.56 %
Trikala (Spring 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	27	6	22.22 %
Trikala (Spring 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	36	36	100 %
Rodopi (Spring 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	7	4	57.14 %
Rodopi (Spring 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	4	4	100 %
Rodopi (Spring 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	21	7	33.33 %
Rodopi (Spring 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	4	4	100 %
Drama (Spring 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	13	10	76.92 %

Drama (Spring 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	8	8	100 %
Drama (Spring 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	13	5	38.46 %
Drama (Spring 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	8	8	100 %
Evros (Spring 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	1	1	100 %
Evros (Spring 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	1	1	100 %
Evros (Spring 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	6	1	16.67 %
Evros (Spring 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	2	2	100 %
Kozani (Spring 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	1	0	0 %
Kozani (Spring 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	1	1	100 %
Kozani (Spring 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	2	1	50 %
Kozani (Spring 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	1	1	100 %
Xanthi (Spring 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	1	1	100 %
Serres (Autumn 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	12	4	33.33 %
Serres (Autumn 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	7	7	100 %
Serres (Autumn 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	14	8	57.14 %
Serres (Autumn 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	7	7	100 %
Karditsa (Autumn 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	1	1	100 %
Karditsa (Autumn 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	2	2	100 %
Kastoria (Autumn 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	4	3	75 %
Kastoria (Autumn 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	3	3	100 %
Kastoria (Autumn 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	4	4	100 %
Kastoria (Autumn 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	3	3	100 %
Grevena (Autumn 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	7	4	57.14 %
Grevena (Autumn 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	3	1	33.33 %
Grevena (Autumn 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	7	7	100 %
Grevena (Autumn 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	5	5	100 %
Trikala (Autumn 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	5	2	40 %
Trikala (Autumn 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	5	5	100 %
Trikala (Autumn 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	5	5	100 %
Trikala (Autumn 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	5	5	100 %
Drama (Autumn 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	6	5	83.33 %
Drama (Autumn 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	4	3	75 %
Drama (Autumn 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	6	6	100 %
Drama (Autumn 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	4	4	100 %

Kozani (Autumn 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	2	2	100 %
Kozani (Autumn 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	2	2	100 %
Xanthi (Autumn 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	7	6	85.71 %
Xanthi (Autumn 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	12	10	83.33 %
Xanthi (Autumn 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	1	1	100 %
Ioannina (Autumn 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	5	3	60 %
Ioannina (Autumn 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	3	2	66.67 %
Ioannina (Autumn 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	10	8	80 %
Ioannina (Autumn 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	7	7	100 %
Pella (Autumn 2018 campaign)	Foxes adult	Serological	VNT/FAVN/ELISA	2	2	100 %
Pella (Autumn 2018 campaign)	Foxes adult	Biomarker	Tetracycline in bones	3	2	66.67 %
Florina (Autumn 2018 campaign)	Foxes juvenile	Biomarker	Tetracycline in bones	1	1	100 %
Florina (Autumn 2018 campaign)	Foxes juvenile	Serological	VNT/FAVN/ELISA	1	1	100 %
Total				571	350	61.3 %

Table A2 - SURVEILLANCE TESTS

Region	Animal species	Category	Test description	Number of tests	Number of cases
Aetoliaacarnania	Dogs	Passive	fluorescent antibody test (IF)	1	0
Aetoliaacarnania	Dogs	Passive	PCR	1	0
Arkadia	Other species	Passive	fluorescent antibody test (IF)	1	0
Arkadia	Cats	Passive	fluorescent antibody test (IF)	1	0
Arkadia	Cats	Passive	PCR	1	0
Arkadia	Foxes	Passive	fluorescent antibody test (IF)	1	0
Arkadia	Foxes	Passive	PCR	1	0
Attiki	Cats	Passive	fluorescent antibody test (IF)	1	0
Attiki	Cats	Passive	PCR	1	0
Attiki	Foxes	Passive	fluorescent antibody test (IF)	8	0
Attiki	Foxes	Passive	PCR	7	0
Attiki	Dogs	Passive	fluorescent antibody test (IF)	1	0
Attiki	Dogs	Passive	PCR	1	0
Attiki	Other species	Passive	fluorescent antibody test (IF)	12	0
Achaia	Foxes	Passive	fluorescent antibody test (IF)	1	0
Achaia	Foxes	Passive	PCR	1	0
Grevena	Other species	Passive	fluorescent antibody test (IF)	1	0
Grevena	Other species	Passive	PCR	1	0
Grevena	Foxes	Passive	fluorescent antibody test (IF)	157	0
Grevena	Foxes	Passive	PCR	16	0
Drama	Cats	Passive	fluorescent antibody test (IF)	1	0
Drama	Cats	Passive	PCR	1	0
Drama	Foxes	Passive	fluorescent antibody test (IF)	52	0
Drama	Foxes	Passive	PCR	14	0
Evros	Cats	Passive	fluorescent antibody test (IF)	3	0
Evros	Cats	Passive	PCR	1	0
Evros	Foxes	Passive	fluorescent antibody test (IF)	13	0

Evros	Foxes	Passive	PCR	1	0
Evros	Other species	Passive	fluorescent antibody test (IF)	1	0
Evros	Wolves	Passive	fluorescent antibody test (IF)	1	0
Evros	Domestic ruminants	Passive	fluorescent antibody test (IF)	3	0
Evros	Dogs	Passive	fluorescent antibody test (IF)	4	0
Evros	Dogs	Passive	PCR	2	0
Evrytania	Foxes	Passive	fluorescent antibody test (IF)	1	0
Ilia	Cats	Passive	fluorescent antibody test (IF)	2	0
Ilia	Dogs	Passive	fluorescent antibody test (IF)	2	0
Imathia	Foxes	Passive	fluorescent antibody test (IF)	2	0
Imathia	Dogs	Passive	fluorescent antibody test (IF)	2	0
Imathia	Dogs	Passive	PCR	2	0
Thesprotia	Dogs	Passive	fluorescent antibody test (IF)	1	0
Thesprotia	Dogs	Passive	PCR	1	0
Thessaloniki	Other wilds carnivores	Passive	fluorescent antibody test (IF)	1	0
Thessaloniki	Cats	Passive	fluorescent antibody test (IF)	2	0
Thessaloniki	Cats	Passive	PCR	2	0
Thessaloniki	Foxes	Passive	fluorescent antibody test (IF)	31	0
Thessaloniki	Foxes	Passive	PCR	5	0
Thessaloniki	Other species	Passive	fluorescent antibody test (IF)	1	0
Thessaloniki	Other species	Passive	PCR	1	0
Thessaloniki	Dogs	Passive	fluorescent antibody test (IF)	2	0
Thessaloniki	Dogs	Passive	PCR	1	0
Ioannina	Cats	Passive	fluorescent antibody test (IF)	1	0
Ioannina	Cats	Passive	PCR	1	0
Ioannina	Foxes	Passive	fluorescent antibody test (IF)	4	0
Ioannina	Foxes	Passive	PCR	2	0
Ioannina	Other species	Passive	fluorescent antibody test (IF)	2	0
Ioannina	Other species	Passive	PCR	1	0
Ioannina	Dogs	Passive	fluorescent antibody test (IF)	2	0
Ioannina	Dogs	Passive	PCR	2	0
Kavala	Foxes	Passive	fluorescent antibody test (IF)	3	0
Kavala	Dogs	Passive	fluorescent antibody test (IF)	1	0
Kavala	Dogs	Passive	PCR	1	0
Karditsa	Foxes	Passive	fluorescent antibody test (IF)	47	0
Karditsa	Foxes	Passive	PCR	15	0
Kastoria	Cats	Passive	fluorescent antibody test (IF)	2	0
Kastoria	Cats	Passive	PCR	1	0
Kastoria	Foxes	Passive	fluorescent antibody test (IF)	26	0
Kastoria	Foxes	Passive	PCR	4	0
Kastoria	Other species	Passive	fluorescent antibody test (IF)	4	0
Kastoria	Dogs	Passive	fluorescent antibody test (IF)	6	0
Kastoria	Dogs	Passive	PCR	3	0
Kilkis	Cats	Passive	fluorescent antibody test (IF)	1	0
Kilkis	Cats	Passive	PCR	1	0
Kilkis	Foxes	Passive	fluorescent antibody test (IF)	25	0
Kilkis	Foxes	Passive	PCR	1	0
Kozani	Foxes	Passive	fluorescent antibody test (IF)	27	0
Kozani	Foxes	Passive	PCR	6	0
Kozani	Wolves	Passive	fluorescent antibody test (IF)	1	0

Kozani	Dogs	Passive	fluorescent antibody test (IF)	1	0
Kozani	Dogs	Passive	PCR	1	0
Lakonia	Dogs	Passive	fluorescent antibody test (IF)	1	0
Lakonia	Dogs	Passive	PCR	1	0
Larisa	Foxes	Passive	fluorescent antibody test (IF)	3	0
Larisa	Foxes	Passive	PCR	1	0
Larisa	Dogs	Passive	fluorescent antibody test (IF)	3	0
Larisa	Dogs	Passive	PCR	1	0
Magnisia	Foxes	Passive	fluorescent antibody test (IF)	1	0
Magnisia	Other species	Passive	fluorescent antibody test (IF)	1	0
Magnisia	Domestic ruminants	Passive	fluorescent antibody test (IF)	2	0
Xanthi	Cats	Passive	fluorescent antibody test (IF)	1	0
Xanthi	Foxes	Passive	fluorescent antibody test (IF)	5	0
Xanthi	Foxes	Passive	PCR	3	0
Xanthi	Other species	Passive	fluorescent antibody test (IF)	3	0
Xanthi	Dogs	Passive	fluorescent antibody test (IF)	1	0
Xanthi	Dogs	Passive	PCR	1	0
Pella	Cats	Passive	fluorescent antibody test (IF)	2	0
Pella	Cats	Passive	PCR	2	0
Pella	Foxes	Passive	fluorescent antibody test (IF)	24	0
Pella	Foxes	Passive	PCR	9	0
Pella	Other species	Passive	fluorescent antibody test (IF)	2	0
Pella	Other species	Passive	PCR	2	0
Pella	Dogs	Passive	fluorescent antibody test (IF)	2	0
Pella	Dogs	Passive	PCR	2	0
Pieria	Foxes	Passive	fluorescent antibody test (IF)	36	0
Pieria	Foxes	Passive	PCR	7	0
Rodopi	Foxes	Passive	fluorescent antibody test (IF)	15	0
Rodopi	Foxes	Passive	PCR	3	0
Rodopi	Dogs	Passive	fluorescent antibody test (IF)	1	0
Rodopi	Dogs	Passive	PCR	1	0
Serres	Foxes	Passive	fluorescent antibody test (IF)	272	0
Serres	Foxes	Passive	PCR	26	0
Trikala	Foxes	Passive	fluorescent antibody test (IF)	24	0
Trikala	Foxes	Passive	PCR	6	0
Fthiotida	Foxes	Passive	fluorescent antibody test (IF)	3	0
Florina	Other species	Passive	fluorescent antibody test (IF)	4	0
Florina	Foxes	Passive	fluorescent antibody test (IF)	6	0
Florina	Foxes	Passive	PCR	1	0
Florina	Wolves	Passive	fluorescent antibody test (IF)	1	0
Florina	Dogs	Passive	fluorescent antibody test (IF)	12	0
Florina	Dogs	Passive	PCR	8	0
Fokida	Foxes	Passive	fluorescent antibody test (IF)	4	0
Fokida	Foxes	Passive	PCR	2	0
Chalkidiki	Foxes	Passive	fluorescent antibody test (IF)	2	0
Chalkidiki	Dogs	Passive	fluorescent antibody test (IF)	2	0
Chalkidiki	Dogs	Passive	PCR	2	0
Total				1,074	0

Number of rabies virus isolates typed for differentiation from vaccine		0
Typing results (please indicate the number of field strains/vaccine strains, and	0	

Table B - WILDLIFE ORAL VACCINATION

Aerial distribution data files:

Downloadable via URL

<https://we.tl/t-Z8VNmTsdNg>**Description of the analysis performed by the Competent Authority on the aerial distribution data and conclusions of the assessment for the quality of the distribution:**

Since the autumn 2017 campaign, the aerial distribution company provides CCA with the necessary software in order to watch and record at real time the flight tracking details. More precisely using software provided by the company, the surveyors are able to access data regarding the location of the aircraft at real time (during each flight of each aircraft and not only at the end of daily missions).

The procedure is as follows:

The official veterinarian (coming from the Veterinary Department of the Regional Unit where the airfield is located) monitors the baits releasing procedure at the airfields, while present at the airfield on the days when the flights take place. The surveyor from the Directorate of Technical Studies at the MRDF receives an email every day from the veterinarian who monitors the bait dropping at the airfields (via the Department of Zoonoses) and from the company in charge of vaccines distribution, as well, setting out data on flights and on vaccine dropping. Furthermore, the veterinarian who monitors the bait dropping procedure from the airfield sends to the Department of Zoonoses data concerning flights (temperature on the day of flight, take-off/landing times, batches and number of baits loaded/unloaded) and this information is forwarded to the surveyor of the Ministry.

Then analyses of these data are made concerning the following:

- A comparison of the flight tracks with those obtained from joining the vaccine bait drop points;
- The distance between the different vaccine-baits releasing points;
- The compliance of the coverage of the areas with the project specifications (to find areas which should have been covered but were not);
- The density of vaccine distribution on maps.

The above points are grouped into one Excel file and together with the vaccine density maps for each Regional Unit are sent to the Department of Zoonoses by email following analysis by the surveyor. It should be highlighted that this procedure is applied on a daily basis, or the following working day that the surveyor of the Ministry is available.

In the Department of Zoonoses an additional check is carried out together with a random check of the take-off and landing data and the hours where they are recorded in the craft's GPS (time of first and last bait drop per craft).

In turn, a veterinarian (seasonal staff) from the National Reference Laboratory for rabies in animals analyses the data sent by the surveyor and reports his findings to the Department of Zoonoses by email

Finally, during the campaign the density maps are sent to the company distributing the vaccines so that corrective measures could be taken in areas where coverage is incomplete.

In relation to the two 2018 campaigns, while distribution of vaccine baits is conducted in smaller areas surrounding cities, villages or communities where the droppings were stopped, a diminished vaccine bait density is noted, as agreed by the Central Competent Authority. In addition, the surveyor from the Directorate of Technical Studies at the MRDF (the Topography department), made an observation about some points of non compliance between flight tracks and bait releasing lines. On this subject, the aerial distribution company replied that when windy or in turns of the aircrafts and on areas where alterations of the flight paths is required due to geographic barriers (high mountainous areas, lakes, rivers, urban areas etc) some differentiations are completely justified.

As illustrated in the pdf attached files showing the bait coverage maps for each regional unit, for both 2018 campaigns, (named 2018 SPRING COVERAGE.pdf and 2018 AUTUMN COVERAGE.pdf), bait coverage is considered satisfactory as for the coverage of the areas included in the ORV programme.

Start date of First Campaign	2/4/2018	End date of First Campaign	26/4/2018
Start date of Second Campaign	3/10/2018	End date of Second Campaign	7/11/2018

Region/Area	Product used	Number of doses	Size of vaccinated area (km ²)	Distribution method
Preveza (Spring 2018 campaign)	Lysvulpen	11,948	442	Aerial
Thesprotia (Spring 2018 campaign)	Lysvulpen	1,004	80	Aerial
Aetoliaacarnania (Spring 2018 campaign)	Lysvulpen	36,381	1,336	Aerial
Evrytania (Spring 2018 campaign)	Lysvulpen	12,223	521	Aerial
Arta (Spring 2018 campaign)	Lysvulpen	38,431	1,441	Aerial
Ioannina (Spring 2018 campaign)	Lysvulpen	91,680	3,358	Aerial
Karditsa (Spring 2018 campaign)	Lysvulpen	59,431	2,257	Aerial
Trikala (Spring 2018 campaign)	Lysvulpen	68,348	2,563	Aerial
Kastoria (Spring 2018 campaign)	Lysvulpen	29,858	1,112	Aerial
Grevena (Spring 2018 campaign)	Lysvulpen	52,555	1,932	Aerial
Kozani (Spring 2018 campaign)	Lysvulpen	87,696	3,191	Aerial
Florina (Spring 2018 campaign)	Lysvulpen	28,310	1,042	Aerial
Fthiotida (Spring 2018 campaign)	Lysvulpen	632	50	Aerial
Larisa (Spring 2018 campaign)	Lysvulpen	138,547	5,042	Aerial
Magnesia (Spring 2018 campaign)	Lysvulpen	366	27	Aerial
Pieria (Spring 2018 campaign)	Lysvulpen	31,789	1,193	Aerial
Imathia (Spring 2018 campaign)	Lysvulpen	40,418	1,423	Aerial
Thessaloniki (Spring 2018 campaign)	Lysvulpen	96,253	3,414	Aerial
Pella (Spring 2018 campaign)	Lysvulpen	62,160	2,188	Aerial
Kilkis (Spring 2018 campaign)	Lysvulpen	70,419	2,474	Aerial
Chalkidiki (Spring 2018 campaign)	Lysvulpen	84,217	3,074	Aerial
Serres (Spring 2018 campaign)	Lysvulpen	103,669	3,775	Aerial
Drama (Spring 2018 campaign)	Lysvulpen	91,122	3,326	Aerial
Kavala (Spring 2018 campaign)	Lysvulpen	43,965	1,632	Aerial
Xanthi (Spring 2018 campaign)	Lysvulpen	48,001	1,728	Aerial

Rodopi (Spring 2018 campaign)	Lysvulpen	67,560	2,459	Aerial
Evros (Spring 2018 campaign)	Lysvulpen	104,049	3,743	Aerial
Preveza (Autumn 2018 campaign)	Lysvulpen	11,714	450	Aerial
Thesprotia (Autumn 2018 campaign)	Lysvulpen	808	56	Aerial
Aetoliaacarnania (Autumn 2018 campaign)	Lysvulpen	37,315	1,366	Aerial
Evrytania (Autumn 2018 campaign)	Lysvulpen	12,953	534	Aerial
Arta (Autumn 2018 campaign)	Lysvulpen	38,526	1,449	Aerial
Ioannina (Autumn 2018 campaign)	Lysvulpen	91,761	3,367	Aerial
Karditsa (Autumn 2018 campaign)	Lysvulpen	59,442	2,246	Aerial
Trikala (Autumn 2018 campaign)	Lysvulpen	66,144	2,570	Aerial
Kastoria (Autumn 2018 campaign)	Lysvulpen	29,356	1,111	Aerial
Grevena (Autumn 2018 campaign)	Lysvulpen	53,095	1,936	Aerial
Kozani (Autumn 2018 campaign)	Lysvulpen	87,743	3,197	Aerial
Florina (Autumn 2018 campaign)	Lysvulpen	28,299	1,044	Aerial
Fthiotida (Autumn 2018 campaign)	Lysvulpen	529	39	Aerial
Larisa (Autumn 2018 campaign)	Lysvulpen	137,104	5,048	Aerial
Magnesia (Autumn 2018 campaign)	Lysvulpen	342	24	Aerial
Pieria (Autumn 2018 campaign)	Lysvulpen	33,112	1,206	Aerial
Imathia (Autumn 2018 campaign)	Lysvulpen	40,078	1,425	Aerial
Thessaloniki (Autumn 2018 campaign)	Lysvulpen	95,880	3,457	Aerial
Pella (Autumn 2018 campaign)	Lysvulpen	61,969	2,187	Aerial
Kilkis (Autumn 2018 campaign)	Lysvulpen	69,030	2,477	Aerial
Chalkidiki (Autumn 2018 campaign)	Lysvulpen	83,872	3,085	Aerial
Serres (Autumn 2018 campaign)	Lysvulpen	102,617	3,786	Aerial
Drama (Autumn 2018 campaign)	Lysvulpen	90,995	3,330	Aerial
Kavala (Autumn 2018 campaign)	Lysvulpen	43,789	1,634	Aerial
Xanthi (Autumn 2018 campaign)	Lysvulpen	47,494	1,720	Aerial
Rodopi (Autumn 2018 campaign)	Lysvulpen	66,949	2,460	Aerial
Evros (Autumn 2018 campaign)	Lysvulpen	105,063	3,758	Aerial
Total		2,997,011	109,785	

Table C - OFFICIAL CONTROL OF ORAL VACCINES BEFORE THEIR DISTRIBUTION

Number of batches distributed	Number of batches controlled by CA	Number of batches rejected
8	8	0

Batch number	Manufacturer	Sampling date	Virus titration result	Outcome of the titration
4824 (Spring 2018 campaign)	Bioveta	10/4/2018	8.09	Acceptable
7824 (Spring 2018 campaign)	Bioveta	10/4/2018	7.57	Acceptable
8024 (Spring 2018 campaign)	Bioveta	10/4/2018	8.09	Acceptable
8225 (Spring 2018 campaign)	Bioveta	10/4/2018	7.8	Acceptable
7824 (Spring 2018 campaign)	Bioveta	16/4/2018	7.7	Acceptable
8024 (Spring 2018 campaign)	Bioveta	16/4/2018	8.68	Acceptable
Field test-Spring 2018 campaign	Bioveta	24/4/2018	8.09	Acceptable
0525 (Autumn 2018 campaign)	Bioveta	16/9/2018	8.6	Acceptable
0625 (Autumn 2018 campaign)	Bioveta	16/9/2018	8.51	Acceptable
0725 (Autumn 2018 campaign)	Bioveta	16/9/2018	8.6	Acceptable
0825 (Autumn 2018 campaign)	Bioveta	16/9/2018	8.52	Acceptable
0525 (Autumn 2018 campaign)	Bioveta	28/10/2018	7.48	Acceptable
0625 (Autumn 2018 campaign)	Bioveta	28/10/2018	7.47	Acceptable
0725 (Autumn 2018 campaign)	Bioveta	28/10/2018	7.46	Acceptable
Field test-Autumn 2018 campaign	Bioveta	5/11/2018	8.28	Acceptable

COMMENT / ADDITIONAL CLARIFICATION

n/a

1.8.10 SANTE Data Collection Platform - PRODUCTION • Contact us at SANTE-XMLGATE3@ec.europa.eu