EUROPEAN HEALTH AND DIGITAL EXECUTIVE AGENCY (HaDEA)

Department A Health and Food
Unit A2 EU4Health/SMP

Food Programmes for eradication, control and surveillance of animal diseases and zoonoses

submitted for obtaining EU financial contribution

Annex I.a: Programme for the eradication of Rabies

Member States seeking an EU financial contribution for national programmes for eradication, control and surveillance of animal diseases and zoonosis shall submit online this document completely filled out by the 31 May of the year preceding its implementation (part 2.1 of Annex I to the Single Market Programme Regulation).

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5) For simplification purposes you are invited to submit multi-annual programmes.
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Member state :	ELLADA
Disease	Rabies
Species :	Fox
This program is multi annual :	no

Request of Union co-financing from beginning of :	2023	*To end of:*	2023
		Year for request	*2023*

Contact data

Name :	Phone :
Email :	Your job type within the CA :

Submission Date
08/12/2022

Submission Number
1670483121905-19211

Standard requirements for the submission of programme for eradication, control and surveillance

A. Technical information

1. Submitted programme

1.1 Provide a concise description of

- the programme with its main objective, overall strategy and timeframe.In case of a long time strategy, interim objectives for each year should be specified.
- target population for vaccination, surveillance and monitoring
- main measures: vaccination scheme, surveillance, monitoring and other measures
- areas of implementation of the programme
- areas you envisage to continue vaccinating from 2020 onwards

(max. 32000 chars) :

The main objective of the programme is the epizootical surveillance of the disease for its early detection and notification, together with the prevention of its re-emergence in Greek territory, as well as the Rabies free status maintenance.

It is implemented through biannual Oral Rabies Vaccination campaigns for the immunization of the red foxes, which consist the reservoir of RABV in Greece, monitoring of the effectiveness of the vaccinations, passive surveillance to the whole territory, and measures to reduce the risk of contact with infected animals and to control the risk of spread and introduction of the disease in the territory.

The Programme for Rabies control and eradication in Greece is described under the Joint Ministerial Decision 331/10301/25-01-2013 (Government Gazette, volume B' 198), which is signed by both the ministers of Rural Development and Food and of Environment and Energy.

Measures and activities related to the Rabies Eradication and Control Program are described and analyzed in the above mentioned Decision. All the relevant procedures are designed and finally issued by the Central Competent Authority (Department of Zoonoses, Animal Health Directorate, Directorate General of Veterinary Medicine) with the collaboration of the other stakeholders.
The Legal base for the implementation of the programme, the "Rabies Control Manual" and other relevant information can be found at the website of the Ministry of Rural Development and Food, at the following link: http://www.minagric.gr/index.php/el/for-citizen-2/nosimata-zoon/457-lissa.

Main pillars of the programme are:
• Mandatory notification of the disease or suspicion
• Passive Surveillance in the whole territory of the country throughout the year.
• Biannual Oral Rabies Vaccinations for wildlife (red foxes) populations by aerial distribution of vaccine-baits.
• Monitoring programme for the effectiveness of the campaigns, starting 30 days after the end of vaccinations per region.
• Control of movements of animals.
• Mandatory registration and vaccination of companion animals (according Regulation (EU) No 576/2013 of the European Parliament and of the Council)
• Raise of public awareness and risk communication.

After the confirmation of the Rabies outbreak in 2012 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 aerial vaccination campaign took place in autumn/winter 2013, the second in autumn/winter 2014, the third in autumn/winter 2015. Since then, ten more ORV campaigns were implemented biannually, with the 13th campaign in autumn 2020.

From the autumn 2016 until 2020 campaigns, the Regional Units involved in the program for both campaigns 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 total actual area covered per campaign was approximately 56.000km^2.

The initial estimation of the number of vaccines needed per campaign for the given vaccination area for the relevant years was 1.490.100.

However, the three-year framework contract, co-signed by the Ministry of Rural Development and Food together with the vaccine-baits producer company and the aerial distribution company ended in 2020. As a result, the availability of vaccine-baits for 2021 ORV campaigns was not ensured. Moreover, the late adoption of the new legal framework (SMP) and the consequent additional delays in National budget allocation, despite all the efforts of the Animal Health Directorate for timely results of a new tender, led to the cancellation of the implementation of the 14th ORV campaign in 2021. Consequently, the implementation of the Oral Rabies Vaccinations (areal distribution of anti-rabies vaccines for wildlife) was cancelled for both spring and autumn campaigns in 2021, due to exceptional circumstances that could not have been by-passed.

The spring 2022 ORV (14th) campaign started on 07.04.2022 and lasted until 15.04.2022.

From 2022 onwards, a modification of the vaccination area and the number of vaccines needed for the given vaccination area has applied. (Please, find attached a file named "new VACCINATION AREA, DOSES AND MONITORING SAMPLING" with relevant data on the vaccination area, number of doses, density, monitoring sampling and expected seropositivity and TTC uptake results.)
More precisely, vaccine-baits are aerially distributed to a zone expanding in 50km along the Greek land borders, so that the total size of area to be vaccinated is reduced to approximately 33.000 km^2 (30.000 km^2 excluding water surfaces, roads, urban and suburban areas as well as areas with altitude over 1.500m).

The 17 Regional Units involved in the programme for the 2022-2023 ORV campaigns are the following: Thessaloniki (part), Thesprotia, Kilkis, Pella, Imathia (part), Kozani, Kastoria, Florina, Ioannina (part), Preveza (part), Evros, Xanthi, Rodopi, Kavala (part), Drama, Serres (part), Grevena (part).

Target population for vaccination, surveillance and monitoring:
The target species for the rabies eradication program are kept and wild animals of species of the following families: Carnivora, Bovidae, Suidae, Equidae, Cervidae and Camelidae, with a priority to the red fox, which is the main reservoir of RABV. In the framework of the oral Rabies Vaccination of wildlife, the target species are red foxes. (Please, find attached a diagram named "Estimated Reproductive Population of foxes" in all greek territory).

In the framework of passive surveillance, all susceptible animals, in greek territory, that are found dead by unknown reason, shall be collected and delivered for testing to the Greek National Rabies Reference

Laboratory (red foxes, wolves, jackals, dogs and cats, ferrets, wild boars, martens, jackals, sheep and goats, minks, wild-cats, bats, squirrels, badgers, hedgehogs, otters, roe deers, red deers, weasels, rats, equidae, rabbits, pigs, cattle, monkeys, bears). Moreover dogs and other mammals found dead by unknown reason or after a road accident or a human exposure are also sent for testing. The majority, among the animal samples delivered for surveillance purposes (>90%), consists of red foxes.
In a very limited number of cases, susceptible species that show symptoms compatible with rabies or unreasonable aggression, if shot, they are sent for testing to the NRL for Rabies.

Taking into account the advice from the EURL and GF-TAD's meetings, there is no predefined sample size recommended for rabies surveillance.

Monitoring is performed 30 days after the end of vaccinations in the relevant areas, with the collection of hunted red foxes coming from the vaccination area. In the framework of monitoring, 4 foxes/100 km^2/ year is the recommended number of animals. (Please, find attached a file named "new VACCINATION AREA, DOSES AND MONITORING SAMPLING" with relevant data on the vaccination area, number of doses, density, monitoring sampling and expected seropositivity and TTC uptake results.)

1.2. Benefits of the programme

Describe

- progress expected compared to the situation of the disease in the previous years, in line with the objectives and expected results
- cost efficiency of the programme including management costs

(max. 32000 chars) :

Greece is listed in Part I of Annex III of the Commission Implementing Regulation (EU) 2021/620 of 15 April 2021 and the country is considered as a Member State with disease-free status from infection with rabies virus (RABV). The maintenance of the free-status obtained is therefore set as the major target of the progress expected.

The main target of eliminating rabies from Greece territory has been obtained through the implementation of oral rabies vaccination campaign in wildlife population of red foxes and the surveillance program implemented.

In general, the costs for the implementation of the ORV vaccination programme were and remain significant. Nevertheless, the modification of the vaccination area and of the number of vaccines needed, which was implemented in the 2022 ORV spring campaign and will continue for the upcoming campaigns, led to significant decrease of the budget.

Thus, we may conclude that the situation has improved and that, in the following years, the implementation of ORV campaigns as well as the improvement in Passive surveillance shall contribute to the maintenance of the free rabies status of the country. In this way, while the benefirts of the implementation of the programme increase, the overall costs for the control of the disease diminish.

2. Description and demarcation of the geographical and administrative areas in which the programme is to be implemented

Provide the name and surface of the areas where the following activities are implemented (if administrative areas are not used, describe the natural or artificial boundaries used to determine the geographical areas)

- vaccination and monitoring
- surveillance

Attach maps

(max. 32000 chars) :

• Vaccination and monitoring
A modification of the vaccination area, of the number of vaccines needed for the given vaccination area and the density of distributed baits per square kilometer was implemented in 2022 spring ORV campaign. More precisely, vaccine-baits were aerially distributed to a 50km zone along the Greek land borders, so that the total size of vaccinated area that was reduced to approximately 33.000 km^2 (30.000km^2 excluding water surfaces, roads, urban and suburban areas as well as areas with altitude over 1.500m).

The Regional Units involved in the programme for the 2022 ORV campaigns were the following: Thessaloniki (part), Thesprotia, Kilkis, Pella, Imathia (part), Kozani, Kastoria, Florina, Ioannina (part), Preveza (part), Evros, Xanthi, Rodopi, Kavala (part), Drama, Serres (part), Grevena (part).

After the redefinition of the vaccination area on the basis of the calculation of an area of 50km inside territorial bordering line, please, find attached the final list of areas to be vaccinated as well as the map illustrating the areas that were covered for the spring 2022 campaign, in a file named "new VACCINATION AREA, DOSES AND MONITORING SAMPLING" with relevant data on the vaccination area, number of doses, density, monitoring sampling and expected seropositivity and TTC uptake results, as well as a map illustrating the areas covered for the campaigns of 2022, named "New vaccination area map".)

• Passive surveillance
The reappearance of rabies in 2012 in Greece led to the intensification of the pre-existing passive surveillance programme in the whole Greek territory.

The target species for the rabies eradication program are kept and wild animals of species of the following families: Carnivora, Bovidae, Suidae, Equidae, Cervidae and Camelidae, with a priority to the red fox, which is the main reservoir of RABV. (Please, find attached a file, named "Estimated Reproductive Population of foxes".)

In the framework of passive surveillance, all susceptible wild or kept animals, that are found dead by unknown reason, in the whole Greek territory, are to be collected and delivered for testing to the Greek National Rabies Reference Laboratory (red foxes, wolves, jackals, dogs and cats, ferrets, wild boars, martens, jackals, sheep and goats, minks, wild-cats, bats, squirrels,badgers, hedgehogs, otters, roe deers, red deers, weasels, rats, equidae, rabbits, pigs, cattle, monkeys, bears). Moreover dogs and other mammals found dead by unknown reason or after a road accident or a human exposure are also sent for testing.

The majority, among the animal samples delivered for surveillance purposes (>90%), consists of red foxes.

In a very limited number of cases, susceptible species that show symptoms compatible with rabies or unreasonable aggression and if shot for that reason, they are sent for testing to the NRL for Rabies. Taking into account the advice from the EURL and GF-TAD's meetings, there is no predefined sample size recommended for rabies surveillance.

3. Description of the disease control strategy of the eradication programme in accordance with Article 32 of Commission Delegated Regulation (EU) 2020/689

3.1. Notification of the disease

(max. 32000 chars) :

Rabies is a notifiable disease, according to Article 9 of Regulation (EU) 2016/429. Each person or professional involved in the management of animals is obliged to notify any suspect symptom recorded or any animal found dead to the Competent Veterinary Authorities. The National legal basis for this is the Presidential Decree 133/1992 and the Joint Ministerial Decision for the Implementation of the Rabies Program in Greece [Number: 331/10301-25/01/2013 (Government Gazette, volume B' 198)].

3.2. Target animals and estimation of the animal population

(max. 32000 chars) :

The target species for the ORV program is the red fox. Because of fox ecology, they play a major role in maintaining the virus in an area, although many other domestic and wild mammals can be affected and transmit the disease (cattle, cats, dogs, badgers, raccoon dogs, roe deer, etc.). (Please, find attached a file named "Estimated Reproductive Population of foxes".)

In the framework of passive surveillance, all susceptible animals-indicators, that are found dead by unknown reason, are to be collected and delivered for testing to the Greek National Rabies Reference Laboratory (red foxes, wolves, jackals, dogs and cats, ferrets, wild boars, martens, jackals, sheep and goats, minks, wild-cats, bats, squirrels, badgers, hedgehogs, otters, roe deers, red deers, weasels, rats, equidae, rabbits, pigs, cattle, monkeys, bears).

Moreover dogs and other mammals found dead by unknown reason or after a road accident or a human exposure are also sent for testing. The majority, among the animal samples delivered for surveillance purposes (>90%), consists of red foxes.

In a very limited number of cases, susceptible species that show symptoms compatible with rabies or unreasonable aggression and if shot for that reason, they are sent for testing to the NRL for Rabies. Taking into account the advice from the EURL and GF-TAD's meetings, there is no predefined sample size recommended for rabies surveillance.

Monitoring begins 30 days after the end of vaccinations in the relevant areas with the collection of hunted red foxes coming from the vaccination area. In the framework of monitoring, 4 foxes/100 km^2/ year is the recommended number of animals.

3.3. Tests used and sampling schemes

Describe :

a. the tests used for surveillance and monitoring, when are to be used and in which animals

b. the sampling schemes in each area of the programme for surveillance and monitoring and details on the collection of dead animals

(max. 32000 chars) :

Rabies surveillance is laboratory based, continuous and performed in the whole territory of the country, to allow for the early detection of spread of rabies or of the re-infection. Emphasis is given to investigation of suspect (domestic and wild) and indicator animals.

Basic data such as date of sampling, location, age and results of laboratory investigations are collected. Disease awareness campaigns for the general public, on a regular basis and regular trainings are organized for the professionals involved in the rabies control programme.

a.1. Tests used for surveillance, when are to be used and in which animals

Laboratory tests are performed in line with the relevant chapter of the Manual of Diagnostic Tests and Vaccines for Terrestrial Animals of the OIE.

The fluorescent antibody test (FAT test) is routinely used.

Nervous tissue samples (derived from the brain of animals delivered for passive surveillance) are tested by the fluorescent antibody test (FAT) and under certain provisions with real-time reverse transcription PCR (RT-PCR), conventional reverse transcription PCR (RT-PCR), sequencing analysis of the N gene and bio-informatics.

One more technique is ready to be accredited in 2022 (delayed due to COVID-19 pandemic): Molecular detection of Rabies (Lyssavirus gene) with SYBR Green Real-Time RT-PCR.

If a positive rabies cases is diagnosed, the sample is sent to the European Rabies reference laboratory for further investigations about the detection of virus genotype.

The Greek NRL performs PCR test as an additional method following FAT, in all inconclusive FAT tests, in all negative for FAT samples related to cases with human exposure, in bats' samples, in cases with autolyzed/putrified samples, or when animal nervous tissue samples provided are not considered as suitable for analysis (broken cranium etc.).

In addition, FAT test is repeated on nervous tissue samples other than that initially tested, from the same animal, in human exposure cases, in cases with autolyzed/putrified samples, or where animal nervous tissue samples provided are not considered as suitable for analysis in accordance to Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2019.

Data regarding animal samples, type and condition of samples, date of sampling, location of animals samples and results of laboratory investigations are collected and kept, for the proper epidemiological evaluation.

a.2. Tests used for monitoring, when are to be used and in which animals:

Monitoring the effectiveness of ORV is based on:
• determination of bait-uptake by detecting the presence of biomarker (tetracycline) and
• determination of seroconversion by detecting rabies specific antibodies in target animals (foxes sampled in vaccination areas).

The detection of the tetracycline in canine tooth and a part of alveolar bone tissue derived from the lower jaw of each fox is performed according to the protocol of the EURL. Tetracycline binding is assessed in teeth and in bones by ultraviolet light examination by inverse microscopy. Moreover, the age of the animals collected is determined on the basis of a histological examination of teeth.

Subsequently, a commercially available blocking ELISA kit is used for the detection of rabies antibodies in serum samples of the foxes.

4 animals per 100 km^2 annually, coming from the areas vaccinated, is the proposed number of hunted target animals (red foxes).

Thirty (30) days after the end of the vaccination campaign in a certain Region, the evaluation of the effectiveness of the ORV (active surveillance-monitoring) starts. The samples are collected by forestry officers, game keepers and hunters, while missions are organized by the forestry services specifically for the purpose of monitoring during periods of hunting prohibition (after a derogation is provided during hunting prohibition periods and only for the purpose of monitoring ORV campaigns).

Data regarding hunted animals, type and condition of samples, date of sampling, location of hunted animals, age and results of laboratory investigations are collected and kept, for the proper epidemiological evaluation.

In 2020, for the first time, the direct rapid immunohistochemical test (dRIT) was used exclusively in the terms of Ring Tests. The dRIT uses rabies virus specific monoclonal or polyclonal antibodies (conjugated to biotin), a streptavidin-peroxidase enzyme, and a chromogen reporter (such as acetyl 3-amino-9-ethylcarbazole) to detect viral inclusions within infected tissue. In approximately 1 h, a brain tissue sample can be tested and interpreted by the dRIT.

b.1. The sampling schemes in each area of the programme for surveillance and details on the collection of dead animals:

Passive surveillance is performed in the whole territory of the country. This programme is based upon a network of authorized veterinarians and veterinary officials, together with Hunters' Associations.

So, samples derived from animals found dead by unknown reason or a car accident and animals showing abnormal behavior suggestive for rabies or animals involved in human exposure are collected by forestry officers, game keepers and hunters and members of environmental organizations. After a phone communication with the Regional Veterinary Services (where the sampling is made by cutting the head of the dead animal), they are further sent to the National Reference Laboratory for Rabies in animals (NRL), which is the Virology Laboratory in Athens Veterinary Center.

b.2. The sampling schemes in each area of the programme for monitoring and details on the collection of dead animals

A ministerial decision, about the start of the vaccination campaigns and the monitoring procedure for the evaluation of their effectiveness, is issued before the beginning of distribution of vaccine-baits for

the red foxes.

Monitoring is performed, starting 30 days after the end of the aerial distribution of vaccine-baits in each Region. In each one of regional units of the country involved in the red fox vaccination campaign, teams consisting of gamekeepers and forestry officers, organize missions for hunting foxes.
The official veterinarians shortly after the delivery of the hunted foxes by the missions, perform the collection of the samples (blood and head), and dispatch them to the NRL.

In addition, during the hunting period only (from August up to the end of February) the hunters themselves are permitted to hunt and provide animals (foxes) for monitoring in the competent veterinary services. Then the procedure is the same; the official veterinarians of the regional veterinary authorities perform the sampling (head and blood collection), and dispatch them to the NRL.

Since summer 2018, the Ministry of Rural Development and Food co-operated along with the 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.

3.4. Vaccines used and vaccination schemes

Describe

- vaccination of kept animals in the framework of the eradication programme
  - vaccine(s) to be used
  - targeted population
- vaccination of wild animals:
  - definition/demarcation of the vaccination area
  - frequency and expected dates of the vaccination campaigns
  - vaccine bait(s) to be used
  - vaccine bait distribution method and designed vaccine bait density
  - vaccination of stray dogs with the vaccine(s) to be used and the targeted population

(max. 32000 chars) :

• Vaccination of kept animals in the framework of the eradication programme, vaccine(s) to be used and targeted population:
The identification and registration of all dogs, cats and ferrets is mandatory. For rabies vaccination in kept animals in the framework of the eradication programme, inactivated virus (for companion animals and livestock), live attenuated virus (for wildlife and free-roaming dogs), or recombinant vaccines (for wildlife, cats and dogs) are used, with vaccines that should confer protective immunity for at least 1 year, in accordance to Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2019 (Chapter 3.1.17., version adopted in May 2018).

• Vaccination of wild animals:
For rabies vaccination in wild animals, SAG2 vaccine-baits (RABIGEN) were used during the first seven (7) campaigns, while for the next six campaigns (8th, 9th, 10th, 11th, 12th and 13th ORV), the SAD Bern vaccine-bait was used (Lysvulpen, BIOVETA). SAD Clone attenuated (Bioveta, Rabadrop) was used for 2022 spring ORV campaign. This kind of vaccine baits shall be used during the next campaigns, after a new three years framework contract already co-signed.

• Definition/demarcation of the vaccination area:
Since the modification of the vaccination area and the number of vaccines needed for the given vaccination area was made, the Regional Units involved in the programme for the 2022-2023 ORV

campaigns are the following: Thessaloniki (part), Thesprotia, Kilkis, Pella, Imathia (part), Kozani, Kastoria, Florina, Ioannina (part), Preveza (part), Evros, Xanthi, Rodopi, Kavala (part), Drama, Serres (part), Grevena (part).

More precisely, vaccine-baits are aerially distributed in 17 regional units of the country, to a 50km zone along the Greek land borders, so that the total size of area to be vaccinated will be reduced to 33.000 km^2.

From the total target area, the urban and suburban areas as well as the roadways, mountains over 1.500m and water surfaces (sea, rivers and lakes) will be excluded. As a result, the total area to be covered is estimated to be 33.000 km^2 (30.000 km^2 excluding also areas with altitude over 1.500m). (Please, find attached a file named "new VACCINATION AREA, DOSES AND MONITORING SAMPLING" with relevant data on the vaccination area, number of doses, density, monitoring sampling and expected seropositivity and TTC uptake results.)

• Vaccine bait distribution method and designed vaccine bait density:

Vaccine-baits are aerially distributed by fixed-wind aircrafts, in 17 regional units of the country. The dropping is performed along parallel flight paths 500 m apart from each other, flight altitude is more than 150 m and the average speed of 100 – 150 km/h. The whole dropping procedure is taking place and is being monitored by a special automatic device equipped with GPS receiver, provided by the baits manufacturer. This equipment is installed in each aircraft, registering and sending the dropping coordinates of each bait “real-time” both to the competent authority and the aerial distribution company at real time.

A geographical information system is used by the topographer of the Ministry for the evaluation of baits’ distribution. This system allows the identification of areas with inadequate bait density that would require additional distribution.

The dropping procedure is supervised by Official Veterinarians of the Regional Units near the airfields involved in the campaigns.

The density of distributed baits per square kilometer is estimated to be over 20 (24-25 baits on average) taking into consideration the experience from other EU and non EU countries as accurate data on fox population in Greece are limited. On average, 723.000 baits are distributed per campaign and approximately 1.446.000 per year.

• Frequency and expected dates of the vaccination campaigns:
The Oral Rabies Vaccination campaigns are planned to be implemented twice a year. The spring campaign is planned to be implemented in April-May and the autumn campaign in October-November each year for having the more appropriate temperatures for the vaccine-bait used. The duration of the vaccination campaign is defined to a month (10-30 days, depending on weather conditions).

• Vaccine bait(s) to be used:
The SAD Clone attenuated (Bioveta, Rabadrop) is the choice of the vaccine-bait used for 2022-2023 campaigns. A three-year framework contract, co-signed by the Ministry of Rural Development and Food together with the Vaccine-baits producer company and the aerial distribution company ensures the availability and the normal supply of vaccine-baits for 2021 - 2024, while maintaining and ensuring prices stability.

• Vaccination of stray dogs with the vaccine(s) to be used and the targeted population:
Regarding stray dogs, the competent municipal authorities are responsible for the implementation of

the anti-rabies vaccination programme. Targeted animals are all the stray dogs aged over 8 months. The identification and registration of all dogs, cats and ferrets is mandatory.

3.5. Measures in case of a positive result

Please describe the measures taken and if reinforced vaccination, surveillance or monitoring are foreseen.

(max. 32000 chars) :

As Rabies is a listed disease, according to Article 9 of Regulation (EU) 2016/429, reporting and notification of the occurrence or suspicion is a mandatory action. Each person or professional involved in the management of animals is obliged to notify any suspect symptom recorded or any animal found dead to the Competent Veterinary Authorities. The National legal basis for this is the Presidential Decree 133/1992 and the Joint Ministerial Decision for the Implementation of the Rabies Program in Greece [Number: 331/10301-25/01/2013 (Government Gazette, volume B' 198)].

In case of detection of positive results in animals, the following actions / measures are applied (all these measures are included in the Joint Ministerial Decision 331/10301/25.2.2013, GG B'198, for the Control of Rabies in animals in Greece):
• management of other animals that were in contact with the confirmed rabid animals (depending on the vaccination status for the domestic dogs - cats) - culling of livestock that was in contact with a confirmed rabid animal
• vaccination of kept animals, after a decision issued by the Regional Veterinary Services.
• destruction of the products produced by the confirmed / suspected rabid animal and intended for human consumption or animal feed (livestock),
• processing of the bedding, the manure and the waste in herds-flocks,
• disposal of the carcasses in an approved processing plant,
• disinfection of the premises (holding etc.) of the dead / slaughtered animals,
• disinfection and incineration of articles that were in contact with the dead / slaughtered animals,
• increase of public awareness in an area where rabies cases have been detected, with informative panels placement.
• restrictions in movements of sensitive animals to the rabies virus from / to the affected areas.

In case of an increased number of rabies cases in wildlife in an area, the possibility of elimination of the fox population or the inclusion of new vaccination areas in our programme may be examined.

3.6 Awareness campaigns and other measures

- *Awareness campaigns :*

  - Please describe the awareness raising campaigns to be implemented

- *Other measures :*

  - Please describe measures to be implemented to reduce the contact with infected animals

  - Please describe coordinated measures with other Member States or third countries, where relevant

Standard requirements for the submission of programme for eradication, control and surveillance

(max. 32000 chars) :

A great effort is being made throughout the year in order to increase public awareness regarding rabies, to reduce contact with possibly infected animals and to improve surveillance and the procedure of notification of the animals that are found dead by the general public to the competent authorities. Thus a communication campaign, emphasizing on the recognition of suspect clinical symptoms for rabies in animals, the philosophy of red fox oral vaccination programme, the time schedule of the vaccination strategy, the areas involved and the prophylactic measures against the spread of the disease in animal populations, is implemented before and during each campaign with the assistance of the Ministry of Education and the regional veterinary services.

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, the Ministry of Rural Development and Food 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. In addition, the Department of Zoonoses of the Directorate of Animal Health produced, in 2019, a new TV spot (https://youtu.be/P_LIR0o5B58), a new poster and a new brochure. These were distributed in the Regional Units' Veterinary Authorities and the hunters associations as well. In parallel, the above documents and TV spot were sent as pdf files (poster and brochure) and wetransfer links (TV spot) in order to be presented through the hunters' associations' publications and sites.

With the aim to enhance awareness among the public, update of the aforementioned types of awareness raising activities is planned in the following years. The cost f the TV spot is foreseen at 10.000euro, the cost of the poster at 4.000euro and the cost of the brochures at 6.000 euro.

Animal Health Directorate (Department of Zoonoses) contacts neighboring countries informing them for the initiation of the oral rabies vaccination campaign. In particular, before the initiation of each ORV campaign, the Department of Zoonoses communicates the information regarding the area of vaccination as well its duration, directly to the relevant veterinary authorities of neighboring countries.

While at the same time the Department of Zoonoses collects information regarding the implementation of the rabies program in neighboring countries, by the presentations of the countries in PAFF Committees, the WHO- Rabies Bulletin (data on passive surveillance of the disease, the vaccination coverage, the positive cases) as well as the publications on the internet regarding the initiation of ORV campaigns in countries bordering to Greece. In addition, information regarding the ORV campaigns schedule performed in Bulgaria is being forward to Greece in the beginning of each campaign.

B. General information

1. Organisation, supervision and role of all stakeholders involved in the programme

Describe :

- competent authorities (CA) involved in the implementation of the programme and their responsabilities
- other stakeholders involved in the implementation of the programme, their role and their communication channels with the CA.

(max. 32000 chars) :

Central Competent Authority:
The Department of Zoonoses of the Animal Health Directorate of the General Directorate of Veterinary Medicine of the Ministry of Rural Development and Food is responsible for:
i. the design, the supervision and the implementation of the programme,
ii. the control at central level and the coordination of all the competent services and parties implicated in the implementation of the programme in the country,
iii. the nomination of the competent authorities and bodies for the implementation of the programme and their competences,
iv. the issuance of guidelines and the supply of clarifications needed for the implementation of the programme,
v. the data collection and the results collections obtained by the implementation of the programme, their evaluation and the communication of the relevant data to the EC,
vi. the collaboration with the competent authorities that are responsible for the Rabies control programme in human sector.

The Directorate of Animal Welfare, Veterinary Medicines and Applications of the General Directorate of Veterinary Services of the Ministry of Rural Development and Food is responsible for the issuance of circulars for the implementation of the electronic identification and registration system of companion animals and for any other aspect related to the companion animals as determined in the Law 4039/2012.

The National Reference Laboratory for Rabies in animals which belongs to the Department of Molecular Diagnostics, FMD, Virological, Rickettsial and Exotic Diseases of the Ministry of Rural Development and Food is responsible for:
i. the receipt of the samples of wildlife and domestic animal species in the framework of the programme,
ii. the implementation of the diagnostic methods for:
• the detection of the Rabies virus and the differentiation of the vaccine strain from the wild strain,
• the control of the immunization of the red foxes as regards rabies following the ORV, the tetracycline detection in the teeth and the determination of the age of the foxes,
• the serological control of the non commercial companion animal movements,
iii. the submission of the data and lab results to the Animal Health Directorate of the General Directorate of Veterinary Services of the Ministry of Rural Development and Food,
iv. the submission of the positive for the rabies virus samples, to the EURL for Rabies with notification of

the Department of Zoonoses of the Animal Health Directorate of the General Directorate of Veterinary Services of the Ministry of Rural Development and Food if it is considered mandatory,
v. the issuance of a monthly list with the tests performed, as well as the issuance of a list each semester and at the end of each year reporting all the tests performed in the NRL as regards the implementation of the surveillance programme in the country according the EU requirements. The above lists are sent to the Department of Zoonoses of the Animal Health Directorate of the General Directorate of Veterinary Services of the Ministry of Rural Development and Food.
vi. the collaboration with the EURL,
vii. the notification of all the information derived by the EURL to the Department of Zoonoses of the Animal Health Directorate of the General Directorate of Veterinary Services of the Ministry of Rural Development and Food,
viii. the scientific and technical assistance to the Department of Zoonoses of the Animal Health Directorate of the General Directorate of Veterinary Services of the Ministry of Rural Development and Food,
ix. the updated information on the epidemiological situation as regards rabies circulation,
x. the isolates are maintained for at least a two years period,
xi. the collaboration with other parties that are responsible for rabies control in human.

The Veterinary Directorates of the Regions are responsible for:
i. the coordination of the implementation of the rabies control and eradication programme in the area of their competence,
ii. the supervision of the implementation of the rabies control and eradication programme in the area of their competence,
iii. the evaluation of the implementation of the rabies control and eradication programme in the area of their competence,
iv. the collaboration with the Veterinary Departments of the Regional Units belonged in their Region, as well as with the Department of Zoonoses of the Animal Health Directorate of the General Directorate of Veterinary Services of the Ministry of Rural Development and Food,
v. the collaboration with the forestry authorities of Departments of the Regional Units belonged in their Region,
vi. the collaboration and the information of the hunting federations and the animal welfare groups in the area of their competence,
vii. the issuance of decisions according to the Joint Ministerial Decision for the National Rabies control and eradication programme.

The Veterinary Departments of the Regional Units are responsible for:
i. the nomination of the veterinarian who will be responsible for the implementation of the programme in their area and the records required,
ii. the sampling of the dead animals and their dispatch to the NRL, the issuance of the accompanying documents, the issuance of Decisions for the measures that should be adopted in the case of positive cases in animals or in the case of suspicion of the disease,
iii. the evaluation of the progress of the programme at Regional Unit level,
iv. the collaboration and the information of the competent authorities in the area of their competence,
v. the confirmation of the anti-rabies vaccination of the shepherd dogs in the area of their competence, during official controls, in the framework of the implementation of tother national programmes,
vi. the information of the private vets, the forestry officers, the animal welfare groups, the hunting federations / associations and the other bodies related to the rabies control programme,
vii. the dispatch of the statistical data related to the programme to the Department of Zoonoses of the Animal Health Directorate of the General Directorate of Veterinary Services of the Ministry of Rural Development and Food,
viii. the imposition of penalties in the case that suspect rabies cases in domestic or wildlife animals are not notified,

ix. the issuance of decisions according to the Joint Ministerial Decision for the National Rabies control and eradication programme.

The Directorate of Forest Management and of Forest environment of the Ministry of Environment and Energy is responsible for:
i. the coordination of the actions required by the forestry officers in the Decentralized Administrations and the nomination of responsible employees in these administrations for the implementation of the programme,
ii. the communicating guidelines to the forestry officers in the Decentralized Administrations, regarding the collection of samples by wild animals, for the needs of passive surveillance programme or for the need of monitoring the effectiveness of ORV campaigns,
iii. the communicating guidelines to the forestry officers in the Decentralized Administrations, the controls performed during game keeping, in the "health booklets" of the hunting dogs (vaccination and registration / identification status),
iv. the communication campaigns addressed to the population activated in the forest regarding rabies and its impact on public health and targeting also to the collaboration with the forestry officers for the collection of wildlife animal species found dead and their further delivery to the NRL for testing.

The forestry officers of the forestry services in the Decentralized Administrations contribute to the collection and delivery to the veterinary departments of the Regional Units of dead animals (sensitive to the rabies virus infection) for the needs of the Passive Surveillance Program, in collaboration with the gamekeepers while they participate in the missions organized for the collection of samples for monitoring the effectiveness of ORV campaigns.
In addition, they have the competence to control the identification status of domestic dogs and cats.
The Hellenic hunting confederation is responsible for communicating information relative to Rabies to the hunting associations / federations and providing guidelines to their members for the process of sampling of the dead animals that are sensitive to the rabies virus and their delivery to the competent veterinary authorities in collaboration with the forestry officers.

The hunters and the private game keepers (which belong to the hunting federations) deliver to the competent veterinary authorities dead animals that are sensitive to the rabies virus in the framework of the Passive Surveillance programme and hunted animals for the needs of monitoring the effectiveness of ORV campaigns.
The private game keepers may perform controls in the health booklets of the hunting dogs especially as regards the anti-rabies vaccination status.
The members of environmental organizations may contribute to the collection and delivery to the veterinary services of the regional units of dead animals for the needs of passive surveillance programme.

In addition, the National Committee for Rabies is established and is consisted of different professionals (veterinarians, medical doctors, laboratory veterinarians, academics (Professor of the Veterinary school of Thessaly is defined as epidemiologist of this committee), public health officials, hunters and scientific collaborators of the Hellenic Hunting Co federation, forestry officers, representatives of the Hellenic Medical Veterinary Society and the Hellenic Veterinary Associations, and veterinarians from the Greek Army and Air Force). The main task for this Committee is the coordination and the effective implementation of National Rabies Control & Eradication Program, their scientific assistance and the solutions proposed for the technical and administrative problems during the implementation of the programme.

The competences for the management of suspect cases in the human sector belong to the Ministry of Health and the Hellenic CDC Center.

2. Legal basis for the implementation of the programme

(max. 32000 chars) :

Legal provisions
Regarding union legislation, as of 21.04.2021, provisions of the 'Animal Health Law 'Regulation EU No 2016/429 and Commission Delegated Regulation (EU) No2020/689 are in place. Further, as it is mentioned hereabove, Greece is listed in Part I of Annex III of the Commission Implementing Regulation (EU) 2021/620 of 15 April 2021 and the country is considered as a Member State with disease-free status from infection with rabies virus (RABV).

The national legislation related to the Rabies control program in Greece is the following:
• Joint Ministerial Decision 331/10301/25-01-2013 (Government Gazette, volume B' 198),
• Joint Ministerial Decision 3941/120925/07.10.2013 (1st amendment of the Joint Ministerial Decision 331/10301/25-01-2013),
• Joint Ministerial Decision 1049/41498/05.04.2016 (2nd amendment of the Joint Ministerial Decision 331/10301/25-01-2013),
• Presidential Decree 133/92 (Government Gazette, volume A΄ 66) (establishing sanitary measures for the protection of livestock-farming from infectious and parasitic diseases), article 3,
• Royal Decree 36/24.4.1936, (Government Gazette, volume A΄ 174) articles 56, 57 and 60,
• Law 4039/2012 (Government Gazette, volume A΄ 15) as amended,
• Presidential Decree 41/2006, which harmonizes Directive 2003/99/EC into national legislation.

The general procedures for the Rabies Eradication and control programme in Greece are described in the Joint Ministerial Decision 331/10301/25-01-2013 (Government Gazette, volume B' 198), which is signed by both the ministers of Rural Development and Food and of Environment and Energy. In this Decision all measures and activities related to the Rabies Eradication and Control Program are described and analyzed. All these procedures are designed and finally issued by the Central Competent Authority in the country (Department of Zoonoses, Animal Health Directorate, General Directorate of Veterinary Medicine).

More precisely this Decision determines:
• the scope of the rabies control & eradication programme,
• the competences of all the implicated authorities and bodies,
• the terms of Passive surveillance and Monitoring the effectiveness of ORV campaigns,
• the procedures for the management of animals (domestic or wildlife) for which there is suspicion for infection with the rabies virus or for the positive cases as well as the procedures when human exposure has occurred and the measures that should be adopted in each case (different cases exist depending on the animal species involves, on whether there is suspicion or confirmation of rabies infection,
• the obligation for anti-rabies vaccination in domestic dogs and cats/identification-registration,
• the control and restriction in animal movements,
• the general aspects related to ORV campaigns and the monitoring program that follows,
• the penalties imposed in the cases of non compliance,
• the biosecurity measures that should be adopted for the people involved in the sampling for the needs of the program,
• the procedure of sampling dead animals and the removal of the head of the animal in order to be sent to the NRL,
• the analytical methods used for Rabies diagnosis.

The Ministerial Decision issued before each Oral Rabies Vaccination campaign provides guidance and

information on:
• the borders and the size of the area of the vaccination,
• the size in km^2 of the vaccination area of each Regional Unit involved in the programme,
• the supervision of the programme by veterinarians in the airfields,
• the monitoring process following the ORV, and more precisely the implicated authorities or bodies, the sampling procedure (blood collected by the heart or using filter papers etc.).

A "Rabies Control Manual" was issued with the cooperation of Veterinary and Health scientists with aim to transfer to the public important information on rabies but also to provide guidelines to veterinary services, private veterinarians, medical doctors, hunting associations and all other implicated parties.

The Legal base for the implementation of the programme, the manual and any relevant information can be found at the website of the Ministry of Rural Development and Food, at the following link: http://www.minagric.gr/index.php/el/for-citizen-2/nosimata-zoon/457-lissa.

3. Historical data on the epidemiological situation, including:

a. a concise description of the following indicators:

- number of confirmed cases by listed animal species (excludes bat cases), during at least the past 5 years
- maps indicating the distribution of confirmed cases referred before per year, during at least the past 5 years
- disease control strategy and results of control measures, during at least the past 5 years
- number of rabies cases in previously (last year) free areas compared to previous year
- % of seroconversion in target species (juveniles/adult separately) compared to previous year
- % of vaccine uptake in target species (juveniles/adult separately) compared to previous year

b. an assessment of the evolution of the indicators along the years is requested as well as obstacles and constraints identified that hamper the progress of eradication.

(max. 32000 chars) :

a. The last human rabies case is dated back in 1970, while the last rabies case in animals was detected in the Evros prefecture in 1987. In October 2012 rabies was diagnosed in a red fox (Vulpes vulpes) in Kozani Regional Unit in West Macedonia Region, in the Northern Greece, causing the end of 25 years of rabies-free health status in Greece. The partial sequencing analysis that followed the confirmation of the first case, as well as the subsequent phylogenetic analysis, verified the transboundary transmission of the disease from the Western Balkan countries.

After the confirmation of the re-emergence of the disease, the pre-existing national programme for rabies passive surveillance according to Directive 99/2003/EC was enhanced.
Measures taken include collection of samples from dead animals in the entire Greek territory, controls of animal movements, awareness of the mandatory vaccination of companion animals. Despite all the implemented measures, the disease spread to northern and central Greece.
Last rabies case in animals was confirmed on May 2014.

• Number of confirmed cases by listed animal species (excludes bat cases), during at least the past 5 years.

Last rabies case in animals was confirmed on May 2014.

During a period of approximately two years, from October 2012 until May 2014, 48 animal cases were confirmed. In detail, there were nine (9) laboratory confirmed cases (7 foxes and 2 dogs) in 2012, twenty

nine (25 foxes, 1 dog, 1 cat and 2 cattle) in 2013 and ten (8 foxes and 2 dogs). The last rabies case was confirmed in a red fox in Pella Regional Unit on May 2014.

• Maps indicating the distribution of confirmed cases referred before per year, during at least the past 5 years

The geographical distribution of the rabid animals from 2012-2014, when the last rabies case was confirmed, is shown in the attached file, named: "Map Rabies cases in Greece, during the years 2012 till 2014.pdf".

• Disease control strategy and results of control measures, during at least the past 5 years

The disease control strategy is based upon:
the implementation of successive biannual vaccination campaigns of the red foxes, the mandatory vaccination of dogs and cats, the measures taken to reduce the risk of contact with infected animals and the control of the risk of spread and introduction of the disease in the territory, based on a risk assessment, public information campaigns and coordination of stakeholders.

After the information provided by ADIS about new cases in Turkey and a new re-emergence of the disease in Bosnia, all stakeholders were informed for increased vigilance and controls.
The above measures concluded to the recovery of the Rabies free status of the country.

• Number of rabies cases in previously (last year) free areas compared to previous year

No cases of rabies have been reported in humans - since 1970 - or animals - since 2014 - in Greece.

• % of seroconversion in target species (juveniles/adult separately) compared to previous year
• % of vaccine uptake in target species (juveniles/adult separately) compared to previous year

The results of Oral Rabies Vaccination Monitoring for the past five years are the following:
- 6th campaign (2017, spring): samples from 173 animals, all Rabies Negative, 36.0% seropositive, 55.5% biomarker positive
- 7th campaign (2017, autumn): samples from 309 animals, all Rabies Negative, 81.1% seropositive, 90.3% biomarker positive
- 8th campaign (2018, spring): samples from 211 animals, all Rabies Negative, 51.9% seropositive, 46.4% biomarker positive
- 9th campaign (2018, autumn): samples from 343 animals, all Rabies Negative, 62.2% seropositive, 91.8% biomarker positive
- 10th campaign (2019, spring): samples from 191 animals, all Rabies Negative, 40.6% seropositive, 45.3% biomarker positive
- 11th campaign (2019, autumn): samples from 316 animals, all Rabies Negative, 61.6% seropositive, 91.7% biomarker positive
- 12th campaign (2020, spring): samples from 144 animals, all Rabies Negative, 47.9% seropositive, 49.3% biomarker positive
- 13th campaign (2020, autumn): samples from 43 animals, all Rabies Negative, 81.4% seropositive, 90.7% biomarker positive

Monitoring the effectiveness of ORV campaigns for 2020 and 2021.

In total for 2020 (187 samples):
• Seroconversion

In a total of 183 blood samples, 122 were derived by juveniles and 61 were derived by adults. Among samples derived by juveniles, 56 out of 122 (45.90%) were seropositive. Among samples derived by adult animals, 46 out of 61 blood samples (75.41%) were seropositive.
• TTC detection
In a sample of total 187 teeth (123 coming from juveniles and 64 from adults), there was detection of TTC line, in 48 out of 123 samples by juvenilles (39.02% - positive). In samples obtained by adult animals, 62 out of 64 (96.875%) teeth samples tested, showed TTC uptake.

In total for 2021 (0 samples): more details can be seen below

b. An assessment of the evolution of the indicators along the years is requested as well as obstacles and constraints identified that hamper the progress of eradication.
Delivery of indicators, in the framework of passive surveillance seems to have been stabilized in a number higher than 700 animals, with few variations.
The results of Passive surveillance for the past five years are the following:
- 2021: 1.008 FAT, of which 161 Real-Time RT-PCR and 8 Conventional RT-PCR, all negative
- 2020: 773 FAT, of which 115 Real-Time RT-PCR, all negative
- 2019: 790 FAT, of which 158 Real-Time RT-PCR, 20 Real-Time RT-PCR Taqman and 2 RT-PCR, all negative
- 2018: 896 FAT, of which 186 Real-Time RT-PCR and 8 RT-PCR, all negative
- 2017: 842 FAT, of which 198 Real-Time RT-PCR and 3 RT-PCR, all negative
(Please, find attached a file, named "PASSIVE SURVEILLANCE samples and cases FROM 2012 UNTIL 2021. pdf").

After the publication of the COMMISSION IMPLEMENTING REGULATION (EU) 2021/620 of 15 April 2021, as regards the approval of the disease-free status of certain Member States thereof as regards certain listed diseases, where Greece is listed as a Rabies-free country, the challenge mostly lies on the maintenance of the status recovery.

• Obstacles and constraints identified:
Problems concerning the ORV 2021 campaigns
The three-year framework contract, co-signed by the Ministry of Rural Development and Food together with the vaccine-baits producer company and the aerial distribution company ended in 2020. As a result, the availability and the normal supply of vaccine-baits for 2021 ORV campaigns was not ensured.

Moreover, the late adoption of the new legal framework (SMP) and the consequent additional delays in National budget allocation, despite all the efforts of the Animal Health Directorate for timely results of a new tender, led to the cancellation of the implementation of the 14th ORV campaign. Consequently, the implementation of the Oral Rabies Vaccinations (areal distribution of anti-rabies vaccines for wildlife) was cancelled for both spring and autumn campaigns, due to exceptional circumstances that could not have been by-passed.

• Other obstacles:

The recommended annual sample size of a minimum of 4 foxes/100 km^2 per year is still difficult to achieve: patchy geomorphologic relief, prohibition of ridged guns, scopes and the use of hunting lights or other equipment that may attract the animals (by law). An additional parameter that holds back the monitoring progress is the fact that fox hunting is not common in Greece. Thus the lack of experience but mainly of the interest by the Greek hunters does not facilitate the fox hunting procedure. Besides, they have got the common belief that fox hunting has a negative effect on the hunting skills and capacity of their dogs.

A different responsiveness of hunters among different Regional Units is recorded, even if these are in

close proximity and even if the same awareness campaigns have been performed. An increase in the financial incentive issued from 2016 had a positive effect on the monitoring sampling delivery, although with uneven geographical distribution of sampling.

The average bait uptake and seropositivity rates could be higher in case, we exclude the spring campaigns. In spring the majority of red foxes vaccinated and hunted were juveniles and they probably were not able to locate or even bite the bait. Furthermore, their immune system was not mature enough to develop a protective antibody titre. To address this issue the Greek Animal Health Directorate informed all stakeholders to target the collection of adult animals with circulars distributed to them.

A regular communication, with reminder circulars, emails and telephone calls has been carried out in order to stimulate their interest to the program, however we still face many difficulties in order to reveal which steps could lead to its success.

4. Control on the implementation of the programme and Intermediate targets

4.1 Control on the implementation of the programme

Describe the system to control the implementation of the programme:

- flight tracks
- methods to be used to assess the correct vaccine bait distribution
- strategy to monitor the effectiveness of the vaccination as regards serology and vaccine bait uptake in the targeted animal population, the sampling schemes, with details on the collection of dead animals, and diagnostic methods
- measures to ensure the maintenance of the quality of the vaccine bait before it is distributed particularly as regards titration of the vaccine baits and controls of the cold chain (official controls to be performed on the vaccine)

4.2 Intermediate targets of the eradication programme:

- expected annual decrease of the number of outbreaks
- expected number of confirmed outbreaks in areas with outbreaks during the previous year
- expected percentage of sero-conversion in targeted animal populations
- expected percentage of vaccine uptake in animals of the targeted species

(max. 32000 chars) :

Control on the implementation of the programme
• system to control the implementation of the programme
• flight tracks
• methods to be used to assess the correct vaccine bait distribution

Under the new procurement, it is claimed that 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 (from the topography service and the Zoonoses Dpt of the Ministry) 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:

• Flight tracks and methods used to assess the correct vaccine bait distribution
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 and Topography of the Ministry of Rural Development and Food (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 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 recorded in the aircraft's GPS (time of first and last bait drop per aircraft) via the real time system.

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.

On the other hand, any remarks made by the surveyor of the MRDF about flights and baits dropping are always co-estimated by the surveyor, a veterinarian (seasonal staff) from the National Rabies Reference Laboratory and the veterinarian from the ministry, who is responsible for the implementation of Rabies Programme together with the aerial distribution company.

• Measures to ensure the maintenance of the quality of the vaccine bait before it is distributed particularly as regards titration of the vaccine baits and controls of the cold chain (official controls to be performed on the vaccine)

• Strategy to monitor the effectiveness of the vaccination as regards serology and vaccine bait uptake in the targeted animal population, sampling schemes, details on the collection of dead animals, and diagnostic methods

Regarding monitoring following the vaccination campaigns of red foxes for the evaluation of their effectiveness, in each one of regional units of the country involved in the red fox vaccination campaign, teams consisting of gamekeepers and forestry officers organize missions for hunting foxes and afterwards the official vets collect the necessary blood and head samples.

The official veterinarians shortly after the delivery of the hunted foxes by the missions, perform the collection of the samples (blood and head), and dispatch them to the NRL.

In addition, during the hunting period only (from August up to the end of February) the hunters

themselves can hunt and provide animals (foxes) in the competent veterinary services. Then, the official veterinarians working in the regional veterinary authorities perform the sampling (head and blood collection), and dispatch them to the NRL.

As concerns the expected percentage of seroconversion in targeted animal populations is up to 62% and the expected percentage of vaccine uptake in animals of the targeted species is up to 70%. (Please, find attached a file named "new VACCINATION AREA, DOSES AND MONITORING SAMPLING" with relevant information.)

• Measures to ensure the maintenance of the quality of the vaccine bait and controls of the cold chain

Cold chain as specified by the manufacturer (usually -20°C or less) during transportation and delivery of vaccine-baits are checked by the registrations of the trucks delivering them to the central cold store in Piraeus.

A Competent Committee performs the initial receipt of the vaccine-baits and takes the appropriate samples from each batch of them (pool of samples).

These samples are further sent to the EURL (ANSES) for stability testing of both vaccine (vaccine characteristics including vaccine titre, genetic and thermo stability) and bait casing.

The committee during the receipt of the vaccines keeps records of the batches, pallets and cartons of the vaccines, and the total number of vaccines that are delivered and controls if the cold chain for the storage of the vaccines is followed. Two thermo Data loggers registering the storing temperature every five minutes in the central cold stores are placed in the cold store room and inside a carton containing vaccine-baits. These registrations are controlled by unannounced visits of a veterinarian, coming from the central or the Regional service and the registrations are extracted and checked.

Similar registrations and controls take place during the delivery of vaccines to the airfields and while loading to the transport vehicles. Thus, both qualitative and quantitative controls in the cold store where vaccines are stored take place.

The storage conditions of the vaccines are also controlled in the airfields where the aerial missions start, by regional official veterinarians supervising the implementation of the program. The registration of the temperature during every procedure is considered crucial. So, registrations of conditions in the cold store facilities during every procedure -starting from the delivery of vaccines until their dropping- are checked and kept. In case of a gap detected, relevant corrections are urgently claimed.

• Targets of the eradication programme

It should be mentioned that no cases of rabies have been reported in humans - since 1970 - or animals - since 2014 - in Greece. Thus, on 01.12.2020 the Head of Animal Health Directorate, on behalf of the Directorate General of Veterinary Medicine of the Ministry of Rural Development and Food, informed by written (Document with Ref. No: 2928/336922) the Directorate – General for Health and Food Safety of the European Commission about the submission of the information to apply for a declaration from Greece ,of its Rabies-free status according to Article 70, paragraph 3(a) of Delegated Regulation (EU) 2020/689.

As a consequence, Greece is listed in Part I of Annex III of the Commission Implementing Regulation (EU) 2021/620 of 15 April 2021, the country is considered as a Member State with disease-free status from infection with rabies virus (RABV).

The maintenance of the free-status obtained is therefore set as the major target of the progress expected.

Controls and verifications for ensuring that testing targets to monitor the efficiency of the oral rabies vaccination (ORV) are reached in 2023 mainly include the issuance of circulars to the local veterinary authorities and other involved stakeholders with which enhancement of active surveillance is requested. Further, constant communication among the central competent authority and all involved stakeholders already in place is planned to facilitate target achievement. If considered necessary, weekly reports of active surveillance activities and/or teleconferences with local authorities will be implemented, in order to monitor activities and mobilize stakeholders.

C. Targets

1. Tests to be carried out for the monitoring of the vaccination effectiveness

Targets for year : **2023**

Country	Region	Animal Species	Type of test	Test description	Number of tests	Expected number of positive results	% positive	
ELLADA	Regional units of :The	Fox	serological test	ELISA	1162	720	62	X
ELLADA	Regional units of :The	Fox	presence of biomarker	Tetracycline in bones	1162	813	70	X
				Totals :	2 324	1 533		

Add a new row

Total tests Serological (FAVN) in MS	0
Total tests Serological (FAVN) in TC	0
Total tests Serological (ELISA) in MS	1 162
Total tests Serological (ELISA) in TC	0
Total tests Serological (Other) in MS	0
Total tests Serological (Other) in TC	0
Total tests presence of biomarker (Tetracycline in bones) in MS	1 162
Total tests presence of biomarker (Tetracycline in bones) in TC	0
Total tests presence of biomarker (Other) in MS	0
Total tests presence of biomarker (Other) in TC	0

2. Surveillance tests to be carried out

Targets for year : **2023**

Country	Region	Animal Species	Category	Test description	Number of tests	Expected number of positive results	
ELLADA	Whole country	Red Fox, dog, cat, \	Suspect or dead animals	FAT	1100	0	X
ELLADA	Whole country	Red Fox, dog, cat, \	Suspect or dead animals	PCR tests	250	0	X
ELLADA	Whole country	Red Fox, dog, cat, \	Suspect or dead animals	Virus characterisation test	2	0	X
ELLADA	Whole country	Red Fox, dog, cat, \	Suspect or dead animals	Virus isolation test	2	0	X
ELLADA	Regional units of :Thessal	Fox	Hunted animals (active s	PCR tests	10	0	X
				Total	1 364	0	

Add a new row

Total tests FAT in MS	1 100
Total tests FAT in TC	0
Total PCR tests in MS	260
Total PCR tests in TC	0
Total tests Virus characterisation tests in MS	2
Total tests Virus characterisation tests in TC	0
Total tests Virus isolation tests in MS	2

Total tests Virus isolation tests in TC	0	
Total other tests MS	0	
Total other tests TC	0	

3 *Wildlife oral vaccination to be carried out*

Targets for year : **2023**

Country	Region / area	Products used	Number of doses	Size of the vaccination area (km²)	
ELLADA	egional units of :Thessaloniki (part),	SAD Clone attenuated	1446000	33 000	X
		Total	1 446 000		
				Add a new row	
		Oral vaccine and baits made of SAD Bern strain in MS	0		
		Oral vaccine and baits made of SAG2 strain in MS	0		
		Oral vaccine and baits made of SAD B19 strain in MS	0		
		Oral vaccine and baits made of SAD Clone attenuated in MS	1 446 000		
		Oral vaccine and baits made of SPBN GASGAS strain in MS	0		
		Total Vaccines distributed	1 446 000		
		Purchase and distribution of oral vaccine and bait in neighbouring TC	0		

(max. 32000 chars) :

4 Official control of oral vaccines to be carried out

Targets for year : **2023**

Country	Number of batches distributed	Number of batches controlled by the CA	Number of virus titrations performed	
ELLADA	10	10	10	X
Total	10		10	
			Add a new row	
		Vaccine titration tests in MS	10	
		Vaccine titration tests in TC	0	

2. Financial information

1. Identification of the implementing entities - financial circuits/flows

Identify and describe the entities which will be in charge of implementing the eligible measures planned in this programme which costs will constitute the reimbursement/payment claim to the EU. Describe the financial flows/circuits followed.
Each of the following paragraphs (from a to e) shall be filled out if EU cofinancing is requested for the related measure.

a) Implementing entities - **sampling**: who performs the official sampling? Who pays?
(e.g. authorised private vets perform the sampling and are paid by the regional veterinary services (state budget); sampling equipment is provided by the private laboratory testing the samples which includes the price in the invoice which is paid by the local state veterinary services (state budget))

(max. 32000 chars) :

The official sampling (animal heads collected by dead or suspect for rabies animals) in the framework of the passive surveillance programme for rabies is performed by the official veterinarians of the regional veterinary services and the samples are sent to the National Reference Lab for Rabies (NRL) in animals.

In brief, gamekeepers and hunters collect the dead animals, pack them and send them to the regional veterinary services.

There, the official vets perform the cutting of the head and further dispatch these samples (into the appropriate packing) to the NRL.
The costs for these procedures (animal sampling, packing materials, transport costs) are covered by the state budget.

Regarding monitoring following the vaccination campaigns of red foxes for the evaluation of their effectiveness, in each one of regional units of the country involved in the red fox vaccination campaign, teams consisting of gamekeepers and forestry officers organize missions for fox-hunting.
The official veterinarians shortly after the delivery of the hunted foxes by the missions, perform the collection of the samples (blood and head - bone) , and dispatch them to the NRL.

In addition, during the hunting period only (from August up to the end of February) the hunters themselves can hunt and provide animals (foxes) in the competent veterinary services. Then the procedure is the same; the official veterinarians working in the regional veterinary authorities perform the sampling (head and blood collection), and dispatch them to the NRL.

In general, funding is provided by the National budget. A relevant request is submitted to the Greek Ministry of Development in order to secure all necessary funds for the purposes of animal disease control, surveillance and eradication and other related expenditure. Following an agreement as regards the total sum to be allocated for the year in question, a first annual joint Ministerial Decision is issued on supplies and procurements. Once issued this Decision is the base for funding of all official animal disease activities including approved National Veterinary programmes and those co-financed by the EC.

The costs for animal sampling, packing materials, transport costs are also covered by the National budget (Greek Ministry of Development , Financial Service of the Ministry of Rural Development and Food in collaboration to the Animal Health Directorate, according to a second joint Ministerial Decision concerning compensations, support and incentives issued each year).

Furthermore, according to the Joint Ministerial Decision mentioned just above, an incentive is provided to hunters, game keepers as well as members of environmental organizations that deliver dead foxes to the competent veterinary authorities in the frame of passive surveillance or to hunters / game keepers for providing monitoring samples. These costs are also covered by the state budget (Greek Ministry of Development, Financial Service of the Ministry of Rural Development and Food in collaboration to the Animal Health Directorate , according to a joint Ministerial Decision issued each year).

For those costs, we kindly ask for co-financing by the EU, as costs for "The collection and delivery (dead/hunted animals) to the competent authorities for sampling and laboratory testing in the case of the animals are tested in the framework of passive surveillance" and as costs for "The collection and delivery (healthy animals) to the competent authorities for sampling and laboratory testing in the case of the animals are tested in the framework of active surveillance (monitoring of oral rabies vaccination)".

b) Implementing entities - **testing**: who performs the testing of the official samples? Who pays?
(e.g. regional public laboratories perform the testing of official samples and costs related to this testing are entirely paid by the state budget)

(max. 32000 chars) :

National Rabies Reference laboratory performs the testing of official samples and costs related to this testing are entirely paid by the state budget.

The salaries of the permanent and seasonal staff are paid by the state budget. The salaries of the seasonal staff working in the NRL for rabies in animals were derived from the state budget and co-financed by the EU until 2020.

Finally, the cost of laboratory consumables required for samples' testing is covered by the state budget (Ministry of Finance, Financial Service of the Ministry of Rural Development and Food in collaboration to the Animal Health Directorate of the same Ministry, according to the joint Ministerial Decision issued each year) and co-financed by the EU.

c) Implementing entities - **compensation**

(max. 32000 chars) :

Culling of suspect for rabies livestock occurs following a decision issued by the competent regional veterinary authority. Then the farmer submits a request for compensation to the regional veterinary service (along with the necessary supplementary documents) and this request is forwarded to the Animal Health Directorate of the Ministry. Then, all these requests derived from different regional units of the country are checked and further approved. Finally, amounts are transferred from the account of Public Investments of the Ministry of Rural Development and Food to the account of the beneficiary Regional Service in Greece. Then, the farmers receive the amount corresponding to them.

The legislative frame for this procedure is the Joint Ministerial Decision issued each year by the Ministry of Rural Development and Food along with the Greek Ministry of Development. In this decision, there is analytical report on the amounts to be paid after culling and the level of compensation is correlated to the animal species and the animal's age.

The cost for the compensation is covered by the National budget.

d) Implementing entities - **vaccination**: who provides the vaccine and who performs the vaccination? Who pays the vaccine? Who pays the vaccinator?

(max. 32000 chars) :

Regarding the anti-rabies vaccination for pets, the owner is responsible to cover the cost and the vaccination is performed by private veterinarians.

Vaccination of livestock and equine species of extensive farming in a radius of 20km around a rabies case can be covered by the state budget.

Regarding the red fox oral vaccination programme, both the purchase of vaccines and their distribution are performed by private companies with a contract issued by the financial service of the Ministry of Rural Development and Food. The costs for these activities are covered by the National budget and are partially co-financed by the EU. The companies are paid by the financial service of Ministry after the finalization of their obligations and the evaluation of their services.

e) Implementing entities - **other essential measures**: who implements this measure? Who provides the equipment/service? Who pays?

(max. 32000 chars) :

The cost for the emergency killing, disposal and/or processing of the carcasses of positive or suspect for rabies animals in rendering establishments is covered by the National budget. In brief, the costs are claimed by the Regional Veterinary Authorities to the Animal Health Directorate of the Ministry. Then, the amounts are transferred to the Regional Veterinary Services. The legislative frame for this procedure is the joint Ministerial Decision issued each year by the Ministry of Rural Development and Food along with the Ministry of Development .

The costs for vaccination as well as serological testing of staff involved in the programme (veterinarians, hunters and persons involved in passive surveillance and monitoring) is covered by the National budget.

2. Source of funding of eligible measures

All eligible measures for which cofinancing is requested and reimbursement will be claimed are financed by public funds.

☒ *yes*

☐ *no*

3. Additional measures in exceptional and justified cases

In the "*Guidelines for the Union co-funded veterinary programmes*", it is indicated that in exceptional and duly justified cases, additional necessary measures can be proposed by the Member States in their application.

If you introduced these type of measures in this programme, for each of them, please provide detailed technical justification and also justification of their cost:

A new TV spot, a new poster and a new brochure for the enhancement of awareness about Rabies and Rabies Programme in the context of "Rabies-free health status" have been produced in 2019. With the aim to enhance awareness among the public, update of the aforementioned types of awareness raising activities is planned in the following years. The cost f the TV spot is foreseen at 10.000euro, the cost of the poster at 4.000euro and the cost of the brochures at 6.000 euro.

Attachments

IMPORTANT :

1) The more files you attach, the longer it takes to upload them .
2) This attachment files should have one of the format listed here : jpg, jpeg, tiff, tif, xls, xlsx, doc, docx, ppt, pptx, bmp, pna, pdf.
3) The total file size of the attached files should not exceed 2 500Kb (+- 2.5 Mb). You will receive a message while attaching when you try to load too much.
*4) IT CAN TAKE **SEVERAL MINUTES TO UPLOAD** ALL THE ATTACHED FILES. Don't interrupt the uploading by closing the pdf and wait until you have received a Submission Number!*
5) Only use letters from a-z and numbers from 1-10 in the attachment names, otherwise the submission of the data will not work.

List of all attachments

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