EUROPEAN COMMISSION

DIRECTORATE-GENERAL FOR HEALTH AND FOOD SAFETY

Food sustainability, international relations

Unit D4 - Food safety programmes, Emergency funding

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 of eradication, control and surveillance 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).
Due to the late adoption of the SMP regulation all programmes will be submitted to be approved technically for 2021 and 2022.

Therefore , this document shall also be filled out and submitted after selection of the options:
This programme is multiannual: "YES"
Request for Union cofinancing from beginning 2021 to end of 2022.

If encountering difficulties:
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5) For simplification purposes you are invited to submit multi-annual programmes.
6) You are invited to submit your programmes in English. Document Version: 2021 2.1

Member state :	EESTI
Disease	Rabies
Species :	Foxes and racoon dogs
This program is multi annual :	yes
Type of submission :	New multiannual programme or Modification of already approved multiannual programn

Request of Union co-financing from beginning of : 2021 *To end of* 2022

First year of implementation of the programme described in this document: 2021

Contact data

Name : [redacted]

Phone : [redacted]

Email : [redacted]

Your job type within the CA : [redacted]

Submission Date
20/10/2021

Submission Number
1634717492514-17765

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

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) :

Two main courses of action are covered by the programme- prevention of rabies among domestic animals in Estonia and oral vaccination of wildlife against rabies in buffer-zone in eastern border. State Budget funds are used to cover the costs of sampling and laboratory investigations of all domestic and wild animals recognized as rabies- suspected by veterinary officials/veterinarians. In addition, testing material is collected from indicator animals (foxes and raccoon dogs found dead, incl. road-kills, animals behaving unnaturally or being sick while hunted) by Estonian Hunters Association and sent to the laboratory for investigations to confirm or overrule disease appearance. Surveillance is conducted throughout the country territory including ORV area with target to collect as many samples as possible from indicator animal without excluding also any suspect case. The samples are taken and tested in the laboratory throughout the year.

Pursuant of Rabies Control Rules an animal owner is required to ensure that the cats and dogs belonging to him or her are vaccinated. According to amendments in above mentioned regulation, since 20.07.09, it is allowed to make booster vaccination in accordance with instructions described in product information sheet of vaccine used, but not sparser, than 24 months have passed from last vaccination. The vaccination of farm animals that graze on woodland pastures and pastures adjacent to forests is recommended. in case of clear indication. Animals are vaccinated by veterinary supervisory officials, authorized veterinary surgeons or licensed veterinarians. The cost of the vaccine and vaccination procedure is covered by the State Budget. In year 2021-2022 approximately 35 000 animals annually (mainly cats and dogs) will be vaccinated against rabies, vaccination of agricultural animals will be carried out only in case of grounded exigency.

First wildlife oral rabies vaccination (ORV) campaign was enforced in autumn of 2005 in ~2/3 part of territory of Estonia. Vaccination activities in total territory of Republic were carried out in years 2006-2010. The programme proceeded in these years included distribution of baits twice a year, spring and autumn, in all Estonian area with slight exceptions (urban ranges, roads, water bodies and wet fields). As a rule, in the frames of campaign, 20 baits per km^2 were distributed manually by trained stuff from fixed-wing airplanes in are ~43 000 km^2. No additional manual distribution from land was carried out. Effectiveness of ORV was evaluated after each vaccination period by carrying out specific laboratory investigations among randomly hunted foxes and raccoon dogs. Since spring 2011 ORV of wildlife was conducted only in buffer-zones with neighboring infected countries wherewith Estonia is bordering- Russia and Latvia to maintain sufficient level of immunity among wild raccoon dogs and foxes. Starting

from year 2015 due to achievement of officially rabies free status of Latvian Republic in this year ORV has been enforced solely in buffer-zone bordering Russian Federation Leningrad Region in north-east and Pskov Region in south-east. Similar ORV area was used and distribution pattern followed in 2015 to 2020. ORV monitoring activities followed in vaccinated areas (testing of target animals for bait uptake and level of achieved immunity). Continuous passive surveillance on suspected cases and indicator animals of the disease has been carried out in total area of the country.

The aim of programme of year 2021 and following year 2022 is in sustainable way prevent Estonian territory from cross-border re-infection from areas, where rabies is endemic or cases occur sporadically. As Latvian Republic has remained officially rabies free since 2016 there is realistic expectation our southern neighboring country areas will remain free from rabies also in the future.
Estonia is having a long state border with Russian Federation (~1/2 of border runs through mainland) in the east. This bordering area, especially the part of mainland, is crucial area where sylvatic rabies can re-emerge and thus ORV must be conducted systematically. A long term buffer-zone vaccination is envisaged in our eastern border notwithstanding financial support from European Commission is kindly offered to create the vaccination belt along the border in the territories of the Russian Federation. By information received from Leningrad Region Governor, they can fully support their ORV programme against rabies from State Budget of Russian Federation and need no financial support from European Commission side. Pskov Region has never showed any interest to have mutual co-operation in rabies eradication activities in State borders. In aforementioned reason, areas of Russian Federation bordering Estonia are not included into present application of co-financing.
This application is presented as multi annual for two years: 2021-2022.
Current programme submitted for years 2021-2022 has in large scale resembling content, as the previous multiannual programmes in years 2015-2017 and 2018-2020.
Vaccination will be carried out in 6 200 km^2 buffer-zone twice a year in spring and autumn. Planned distribution density of vaccine baits is 20 baits per sq km. Public tenders will be officiated to obtain sufficient amount of vaccine-baits and distribution service in early 2021 for vaccine and early 2022 for distribution service. Relevant contracts will be undersigned for years 2021 and 2022. When the contracts will be out of date, new public procurement follow. Services of collection of samples for monitoring of ORV and collection of samples from indicator animals will be proclaimed as a result of public procurement on an annual bases. Prior the campaigns sampling is done from all vaccine batches to control vaccine titer level suitability by EU reference laboratory ANSES Nancy. Bait-dropping is performed by fixed-wing airplanes by trained stuff manually through the constructed special tube inside the plane. Flight altitude is – 100- 150 m, speed – 150 - 200 km/h and distance between parallel distribution lines ~ 550- 600 m. Navigation tool used for navigation is GPS Garmin Aera 500, which also allows recording of flight track and make offprint afterwards. Distribution of vaccine baits is not carried out in the urban area (town, villages etc), in area of water (lakes, rivers, deep swamps etc) and in area of roads, highways and railways.
Awareness campaign will be carried into force in vaccinated and surrounding areas at the time of distribution activities. Efforts will be continued (meetings, regular communication and informational . leaflets, TV, radio and social media commercials) to increase the awareness of publicity and especially veterinary stuff and hunters about the rabies risk. Also a brand new initiative conducted in 2019 and 2020 will be continued in 2021. Two up to three days lasting free of charge vaccination campaigns in the most endangered area of country- South-East Estonia for accompanying animals were organized in 2019 and 2020 and will be initiated in North-East of Estonia at the end of August 2021. Campaign was and will be widely popularized in national and local media, newspapers, internet portals, radio e.c.

Continuous surveillance for rabies in all animal species will be carried out by Agricultural and Food Board in entire Estonian territory.
In any case, when rabies suspicion is broach from the by authorized veterinarian or veterinary official,

laboratory investigation will follow. Costs of these investigations are covered by State Budget.
Brain samples from foxes or raccoon dogs falling into category of indicator animals (e.g. road kills, animals found dead, animals acting unnaturally, entering human settlements, visually ill animals e.c.) will be collected by hunters throughout the country territory.
To control bait-uptake and seroconvertion rate by the target animals up to 4 healthy foxes and raccoon dogs/100 km^2 will be hunted from areas of ORV. Blood and head samples of above-mentioned animals will be send to the laboratory for relevant investigations.
Raw data about samples collected for surveillance- three groups separately - suspected cases, indicator animals and healthy animals shot for monitoring is extracted from Veterinary and Food Laboratory's database at the end of each month. Summary tables on county level by species (in case of indicator animals, also by groups of indicator animals) are formed consequently on monthly bases, summary tables on district level twice a year. At the end of each month feedback is given to Estonian Hunters Organization and local representations of the Board about execution of contract/plan and adjustments needed to assure homogeneous collection of samples from appropriate sampling groups. In case illogicalities are discovered (for instance healthy animal shot sent for sampling as indicator animal), person who formed the covering letter is contacted directly to clarify details of the situation. According to contact, Estonian Hunters Organization presents reports intermediate report and final report about samples collected. Official reports about samples collected from suspected animals are prepared on quarterly bases. Mapping on samples collected and results obtained is done on annual bases, when contracts concluded, all samples tested and results available.
Results of surveillance sampling /ORV monitoring are also formed from raw data tables to summary tables on county level by species on monthly bases. As all samples collected for surveillance from suspected animals and indicator animals have been proven to be negative since January 2011, there has been not too much to analyze (with exception to identify, have there been some areas with low number of samples collected). Summary tables on ORV monitoring results are analysed in more detailed way when sample-collection period ends (in March of the year following ORV year). The data concerning sampling density and TC and seroconvertion results for head and serum samples is also analyzed in both , county and district level, also in level of adult animals verus juveniles. In case unsatisfactory results of bait-uptake are obvious in some district, flight data and distribution data files of area involved will undergo revision to determine, can there some obvious reason for it (mistakes in bait distribution, features of distribution area e.c.) .

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) :

General objective of the programme is preventing rabies cases among wild and domestic animals and via this reducing the probability for humans to get infected with rabies.
By retaining vaccination belt between Estonian territory and neighboring infected areas, re-infection of areas free from rabies will be avoided. It is expected, that official freedom from rabies is maintained.
Estonia has been using the vaccine of highest value and quality in the past, but this has been the only exclusive component of Estonian programme. In nowadays, the price of the vaccine is still the same,

but unfortunately we have no possibility to use the same vaccine, as in the past. All other arrangements- the distribution pattern used: 20 baits/km^2 notwithstanding swings in reservoir and transmitters animals populations, manual distribution from air, minimal adequate depth of the buffer -zone applied (50 km and 30 km), targeting surveillance and monitoring to appropriate test- are made in the most cost efficient way as final goal-rabies freedom has been forfended.

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) :

Estonia is bordered to the north by the Gulf of Finland, to the west by the Baltic Sea, to the south by Latvian Republic (343 km), and to the east by the Russian Federation (338.6 km).

Buffer-zone in east border with Russia will be retained in years 2021-2022.
Rabies virus is widely spread in territory of Russian Federation, several cases also occur in close neighborhood of Estonian-Russian mainland border. To protect potentially rabies-free area from a neighboring infected area, the immunological barrier along the mainland border with Russian Federation Pskov Region area is 50 km in depth. In eastern and north-eastern part of the border with Russia very good natural physical barriers exists. Lake Peipsi is the fifth largest in Europe, covers 3,500 km^2, its shore length is 520 km and an average depth of 7 m. Lake Peipsi constitutes impassable barrier for most of time of the year, as distance between its coasts can be counted in tenths of kilometers in most occasions. Lake Peipsi is drained by river Narva, largest river in Estonia, which could be crossed by target species only in limited time in cold winters, while frozen. Depth of the buffer zone near Peipsi is reduced to 30 km (measured from lake's eastern coast) and towards river Narva vaccination area is 30 km wide.
In total, vaccination area of buffer-zone facing Russia covers ~ 6 200 km^2, area suitable for bait-dropping is around 6 100 km^2.
See the map of vaccination area in 2021-2022 in Estonia in Annex (Figure 1).

In the case rabies situation will deteriorate in Estonia (re-infection occurs in areas far from country border) or in Latvia (rabies cases in closer surrounding, then 50 km from Estonian border), alterations from original strategy to conduct ORV will be essential (giving occasion for need of reallocation of financial resources necessary for implementing the programme).
Notification system of all rabies-suspected cases in wild and domestic animals is applied in all over the territory of Estonia. In case of suspicion, laboratory investigations will follow. As a part of passive surveillance conducted throughout the country territory brain samples from indicator animals (foxes or raccoon dogs found dead, including road-kills, animals with unnatural behavior, sick animals e.c.) will be collected by hunters. It is aimed to collect as many samples as possible, indicative number per year is 1 450 samples.
The efficiency of OV campaigns will be measured by testing samples collected from foxes and raccoon

dogs inhabiting areas of ORV in 2021-2022 for marker detection and seroconvertion rate. Age group of abovementioned animals is verified. Number of samples expected per 100 km^2 is 4 foxes/raccoon dogs.

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) :

According to Regulation No. 34 of the Minister of Agriculture of 25 November 1999 "List of infectious animal diseases subject of notification and registration", rabies is a dangerous infectious animal disease subject of notification. Consolidated version of abovementioned act in Estonian is available in webpage https://www.riigiteataja.ee/akt/128122012008

Regulation No 67 of 20 November 2000 by Minister of Agriculture "Rules for Rabies Control" enforces line of action in case of rabies suspicion/diagnose. Consolidated version of the Minister of Agriculture Regulation of 20 November 2000 No 67 "Rules for Rabies Control" is available in Estonian in webpage: https://www.riigiteataja.ee/akt/104112020039
Owner of domestic animal or licensed veterinarian should notify without delay to veterinary services about the unnatural behavior of animals or other characteristic symptoms of the rabies. The local authority of the AFB has to be notified immediately about the entrance of a wild animal into human settlement, its attack to a domestic animal or human. An authorised veterinarian and the laboratory which diagnoses rabies are obliged to notify the local authority of the AFB about rabies or rabies suspicion. The local authority of the AFB has to notify the local authority of the Health Board about the contact between a man and an animal who has the rabies or who is suspected to have the disease.

3.2. Target animals and estimation of the animal population

(max. 32000 chars) :

Target population of ORV programme are reservoirs of the disease, red foxes and important transmitters raccoon dogs.
There is no present-day counting data available for those species.
According to the data of the Ministry of Environment population growth of foxes and raccoon dogs was rapid in years following start of ORV. In 2009 to 2010 their increase turned to be moderate, since 2011 to 2019 population of foxes has been in ongoing decrease. Hunters estimation verify the population decrease of foxes was remarkable in 2015 as well as 2016. In 2020 hunters estimation show moderate increase in fox density. What concerns raccoon dogs, estimations of numbers have shown persistent increase within last half of century. Hunter's estimations in years 2011-2012 indicated population growth has stabilized and statistics since 2013 indicate moderate decrease in latter species numerical values as well. In 2017, the decrease of population was more intensive. Decrease is ongoing also in 2020. Changes in small predator's population sizes have been influenced by numerous cases of scabies diagnosed visually in all regions of the country spread by foxes and raccoon dogs. The outbreak of sarcoptic manage has been spreading more freely among raccoon dogs due to warm winters within last three years course as these species had problems to hibernate. In addition, since 2020, cases on canine distemper has been diagnosed among small wild predators.
These trends of population –size are based on the results of questioning of hunters in every hunting-

region yearly concerning their opinion, is the trend of population growth positive or negative.
Hunting bag for foxes was 4 659 individuals and for raccoon dogs 5 592 individuals in 2020.

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) :

Testing material is collected by authorized veterinarians/veterinary officials from all rabies suspected animals for laboratory investigations to confirm or overrule disease appearance.
Tests carried out in case of rabies suspicion are Fluorescent Antibody Test (FAT), virus isolation on cell culture (CC) and polymerase chain reaction (RT-PCR). In case sample investigation by FAT has given negative or suspicious result and animal had contact with non vaccinated animal or person, additional testing by CC and RT-PCR will follow. Testing procedure for samples which are tested by FAT with positive result- result will be reported without additional testing.
In addition to suspected cases passive surveillance is conducted throughout the country territory (including ORV area) by collecting brain samples from indicator animals foxes and raccoon dog which are the priority categories for virus investigation. FAT is used for laboratory investigations of these brain-samples. If in previous years in exceptional cases where there was a lack of sampling material also healthy hunted small predators were tested for virus since spring 2015 solely samples from indicator animals collected by hunters have been accepted.
ORV monitoring is conducted in areas of bait-dropping. Head and blood samples are collected from 4 healthy foxes and raccoon dogs per 100 km^2 of ORV area. Detection of tetracycline in teeth and bone specimens by fluorescence is carried out on these samples; additionally age of all tested animals is determined. The enzyme-linked immuno-sorbent assay (ELISA) technique is in use for testing of wildlife sera after ORV to confirm population immunity level achieved.

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) :

Due to improvement of rabies situation in recent years, legal bases in Regulation No. 67 of the Minister of Agriculture “Rabies Control Rules” of 20.11.2000 (RTL 2000, 120, 1876) concerning vaccination of

domestic animals were changed in year 2009. Animal owner is required to ensure that the cats and dogs belonging to him or her are vaccinated. Primary vaccination of dogs and cats takes place when animal is 3-4 months old. For decades as a rule, animals were re-vaccinated once a year, preferably after 12 months of the last vaccination. According to amendments in above mentioned regulation, since 20.07.09, it is allowed to make booster vaccination in accordance with instructions described in product information sheet of vaccine used, but interval between vaccinations can not be longer, than 24 months have passed from last vaccination. The vaccination of farm animals that graze on woodland pastures and pastures adjacent to forests is recommended. Animals are vaccinated by veterinary supervisory officials, authorized veterinary surgeons or licensed veterinarians. Since 18.12.09., it is compulsory to issue to animal owner after each vaccination an acknowledgment of vaccination (as a certificate, mark in passport e.c.) were vaccination date and re-vaccination date will be designated. This document should be retained at least until revaccination of the animal.
For vaccination of domestic animals different inactivated adjuvant vaccines (Rabisin, Nobivac Rabies and Biocan R) have been used within last years as a vaccine procured for implementing the State Program on Monitoring and Surveillance of Animal Infectious Diseases. Also other rabies vaccines registered by State Agency of Medicines could be exploited by licensed veterinarians.

For ORV of wildlife vaccine is procured via public procurement by AFB. Bidder is fully responsible for ensuring the consistency of the supply, proper storage and transportation facilities of baits. Vaccine must be registered in Estonian State Agency of Medicine or registered at the European Community Register of veterinary medicinal products. Vaccine baits should be in compliance with European Pharmacopoeia monograph N°746, p 1011-1012 "Rabies vaccine (live, oral) for foxes and raccoon dogs". The baits must fulfill WHO recommended criteria of efficacy, pathogenicity and stability. Vaccine should consist of bait casing attractive for the foxes and raccoon dogs and containing a capsule or a sachet consisting of live vaccine against rabies. The bait should contain a biomarker tetracycline.
As a result of public tenders, Rabigen SAG-2 has been used for wildlife vaccination in Estonia from the start of ORV in autumn 2005 till end of year 2017. As Virbac announced its decision to stop production of Rabigen SAG2 starting from 2018 . As a result of public tender, Rabitec baits (attenuated live rabies vaccine virus, strain SPBN GASGAS) have been used starting from spring 2018 till nowadays.
Distribution of baits is carried out biannually, in spring and autumn. Prior the campaigns from every vaccine batches 10 baits are sent to the EU reference laboratory for rabies to control existence of proper vaccine titer. For distribution of vaccine baits small-scale airplanes type Cessna 172 are used. Baits are dropped manually by trained persons through the tube system, specially constructed into planes. Dropping is stopped while flying over urban areas, roads, rivers, lakes and deep mashes. Flying takes place in the principle of parallel lines, distance between flight lines used is from 550 up to 600 meters and altitude from ground 100 – 150 meters. GPS Garmin Area500 is used as navigation tool, which also allows recording of flight track and make offprint afterwards. Distribution density of vaccine baits is as a general rule 20 baits per sq km. No additional manual distribution from ground is carried out.
Public tenders were officiated in early 2021 to purchase vaccine baits for year 2021. To acquire distribution service, two-years tender was officiated in spring 2020. The contracts undersigned are valid till end of year 2021. In early 2022 follow-on public tendering procedures will be started.

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) :

Measures in case of rabies suspicion/diagnose on cat or dog.

A cat or a dog with rabies suspicion has to be isolated for at least 14 days into an area surrounded by fence or into a separate closed room pursuant to the orders of the veterinary supervisory official or authorized veterinarian or killed without damaging its head if the animal keeper cannot ensure safe isolation of the animal or the animal keeper cannot be identified. The veterinary supervisory official or the authorized veterinarian take samples from the killed animal, also from the animal, who has died during the isolation period and send these to the laboratory.
After the sample for analyses has been taken the carcass of the animal has to be burnt. If rabies is not confirmed within 14 days, the veterinary supervisory official or the authorized veterinarian can release the animal from isolation after examining it and if necessary, vaccinating it.

Measures in case of rabies suspicion/diagnose on farm animal.
If rabies is diagnosed with one animal of the herd the authorized veterinarian has to examine all other animals of the herd in order to find typical clinical symptoms of rabies or animals with traces of bites. The veterinary supervisory official has to issue an order for compulsory killing of all animals with the suspicion of rabies or isolation of those animals for at least 14 days into an area surrounded by barriers or into a separate closed room. After having taken samples, the carcass of the animal has to be destroyed immediately pursuant to the prescriptions of the veterinary supervisory official. If the infection source is not known, the authorized veterinarian or the veterinary supervisory official can order the rest of the herd to be vaccinated. The herd has to remain under the supervision of the local authority of the Agriculture and Food Board for at least 30 days. The animal keeper is obliged to notify the authorized veterinarian about all health disturbances of the animals. Restrictions about animal's movements, slaughtering and use raw milk and raw milk products are adjusted to herd. The room where the animal with rabies is kept, the animal's bed or the isolation room and the objects which are probably contaminated with the virus have to be disinfected pursuant to the orders of the veterinary supervisory official or the authorized veterinarian.

Measures in case of rabies suspicion/diagnose on wild animal.
The wild animals with suspicious behavior should be killed pursuant to the orders of the veterinary supervisory official or the authorised veterinarian without damaging the animal's head. Samples should be sent to the laboratory for confirmation or overruling of rabies suspicion. After samples have been taken the carcass of the wild animal has to be burnt or buried pursuant to the prescription of the veterinary supervisory official. The veterinary supervisory official or the authorised veterinarian in cooperation with the Environmental IBoard and a person holding the hunting right determines the probable trajectory of the animal's movement and the fact whether it has bitten a domestic animal or a human. All animals bitten by suspicious/infected animal are treated as rabies suspected until proven contrariwise.
The local authority of the AFB has to notify the local authority of the Health Board about the contact between a man and an animal who has the rabies or who is suspected to have the disease.
Measures to control, are you reading with full attention, dear colleague, and if you are- it is appropriate to smile.

In any case, when rabies is diagnosed, epidemiological investigation will follow. Scope of investigations is to determine time and source of infection, potential ways of spreading of disease, other contact animals.
In case re-emerging rabies case(s) appear inside country in unvaccinated area, emergency vaccination will follow in the surrounding of 20-50 km from outbreak (depending upon existence of natural or artificial barriers of the movements of reservoir animals). If rabies case(s) are discovered inside buffer zone, further, then 25 km from unvaccinated area, buffer-zone will be expanded accordingly for next vaccination campaign. If less, the 25 km is between inner edge of vaccination belt and rabies case, emergency vaccination in sufficient area of unvaccinated territory will follow. AFB can decide not to carry out an emergency vaccination in case source of rabies infection is an imported animal, when based on results of epidemiological investigation infection has not been spread to wildlife. To conduct emergency

vaccination an additional financial support would be applied from State Budget and European Commission. Surveillance will be reinforced in the total territory of the country. ORV monitoring will be conducted in areas of ORV, including emergency vaccination areas by the same principals as in buffer area (4 animals/100 km^2- TC and AB detection, identification of age-group of the animal tested).

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

(max. 32000 chars) :

Awareness campaign is carried out twice a year at the time of the beginning of ORV on national TV, Estonian and Russian speaking radio-channels and in local newspapers in order to inform publicity concerning vaccination activities. Brochures in Estonian and Russian languages have been elaborated and printed to be distributed via veterinary centres, clinics, hunters organizations, directly to pet owners at the time of vaccination campaigns e.c. Due to change in Boards name, all TV and radio clips for ORV or Estonian and Russian-speaking audience had to be redone in 2021. A dome www.marutaud.ee (rabies. ee) has been created, registered and kept active and up to date to assemble easy to understand key topics about the disease including its prevention among wild and domestic warm-blooded animals. In 2019 a new social media clip was subscribed, filmed and made widespread via Internet portals (including Facebook of our Board). New radio clips cheering animal owners to vaccinate their pets against rabies were recorded in 2021 in Estonian and Russian. Also a brand new initiative conducted in 2019 and 2020 was continued in 2021. In 2019 and 2020 two up to three days lasting free of charge vaccination campaigns in the most endangered area of country- South-East Estonia for accompanying animals were organized by AFB. 3 teams of veterinarians of Central Office of Agriculture and Food Bard, local veterinary offices and authorized veterinarians vaccinated in total more than 500 in 2019 and more than 1 100 in 2020 cats and dogs in countryside areas. In 2021 similar kind of campaign was enforced late August in Ida-Virumaa (areas next to Russian border). Campaign with materials prepared in both Russian an Estonian was widely popularized in national and local media, newspapers, internet portals, radio e.c. Once a year in Boards Facebook page it is possible for publicity to ask questions and discuss problems with specialist on rabies. Training (virtual and on the spot) has been organised for licensed veterinarians in all four regions by PTA covering also rabies surveillance and pet vaccination item in 2021. 2-3 trainings for hunters collecting surveillance and monitoring samples have been planned/organised annually in 2021-2022.

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) :

The Agriculture and Food Board (AFB), a governmental agency carrying out its tasks under the government of the Ministry of Agriculture, is functions as a supervising body and sees that the requirements stipulated by the legislation that governs veterinary, food safety, market regulation, animal welfare and farm animal breeding are followed. AFB executes supervision over fulfillment of these requirements and applies enforcement by state pursuant to the procedures and in the amount prescribed by law. The organization of the AFB consists of the central office and 4 regions. In each county, local representation of AFB exists.
The central office of the AFB has 14 departments; management of infectious diseases programmes (including State Programme for rabies prevention) is responsibility of the Animal Health and Welfare Department. ORV of wildlife is duly coordinated by AFB central office. Latter is responsible for defining the area of ORV, methodology of vaccination, organization of monitoring and surveillance, tendering procedures for oral (and also parenteral) vaccination, contracting, co-ordination and control of ORV activities, maintaining awareness of publicity, collection and statistical analysis of data, reporting to EU relevant institutions and international unions e.c.
While elaboration and general coordination of the implementation of the rabies eradication programme is the responsibility of the central authority of the AFB, 15 local representative offices in the counties are responsible for coordination of implementation of the programme in the local level. There is an animal health specialist in every county, who is responsible for solving the problems of this particular area. Concerning ORV of wildlife, local representative offices are mainly responsible for supervision of homogenous samples collection, including packing of material and delivery of samples to the laboratory for surveillance and monitoring of ORV. Local representative offices are also responsible for enforcement of compulsory pareneteral vaccination program of cats and dogs and surveillance in all animal species to detect occurrence of rabies. In addition to the above-mentioned full-duty employees, authorised veterinarians are working for AFB on contract bases, performing practical activities-vaccination procedures with parenteral vaccine procured by State and sample collection from rabies suspected animals. Licensed veterinarians have also right to vaccinate animals against rabies by using vaccine, registered in State Agency of Medicine. All licensed veterinarians are responsible for notifying about rabies suspicion to veterinary officials.
AFB central office carries out training courses for the supervisory officials of local offices and authorised veterinarians. All personnel working in animal health and welfare field are veterinarians.

In performing rabies eradication activities, AFB uses the services of the Veterinary and Food Laboratory

(VFL). Most of diagnostic work in the frames of rabies programme (with exception of baits titration and virus genotyping, latter are carried out in EU reference laboratory ANSES Nancy) is carried out in VFL of Estonia. VFL has central laboratory and three departments: in Tallinn, Rakvere and Kuressaare. All laboratories of the VFL are accredited by the Estonian Accreditation Centre according to EVS-EN ISO/IEC 17025:2006. Rabies virus investigations as well as all investigations of ORV efficiency control (detection of tetracycline bio-marker in teeth, determination of animal age, detection of rabies post-vaccination antibodies and viral antigen from brain tissue) are carried out in VFL Central Laboratory. VFL registers samples, makes necessary examinations and reports results to AFB. Communication with international reference laboratories is also responsibility of VFL.

Samples collection for ORV monitoring and surveillance on indicator animals is carried into force by using services of Estonian Hunters Association. To avoid mixing up the targeted testing groups of ORV monitoring and rabies surveillance by hunters, two separate contracts are undersigned with Estonian Hunters Association. First of them is so called “indicator animals contract” to collect as much as possible fox/raccon dogs head samples from road kills, animals found dead, behaving unnaturally or being visually sick in total territory of the Republic . Around 1100 head samples from suitable foxes and raccoon dogs will be collected per year. To facilitate the sample collection procedure and homogenize sampling suggestible division of samples is presented in the annex of the contract by counties.
In the frames of second contract "ORV monitoring contact" blood and head samples from healthy target animals shot in ORV area will be collected from early summer of ORV year till March of following year. The average sampling density yearned for detection of bait-uptake and immunisation-rate is 4 animals per 100 sq km annually. Precise numbers and locations in district level from where samples to monitor ORV should be collected are pointed out in the annex of the contract as well as precise maps with areas of ORV.

AFB is co- operating in rabies control field also with other governmental institutions mainly Health Board and Ministry of Environment.

2. Legal basis for the implementation of the programme

(max. 32000 chars) :

The State Programme for rabies prevention carried out in Estonia is based on the Infectious Animal Disease Control Act, the Regulation Minister of Agriculture No. 67 “Rabies Control Rules”, the State Programme on Monitoring and Surveillance of Animal Infectious Diseases approved annually by the Director General of Agriculture and Food Board and State Program of Rabies Eradication for years 2021-2025 approved by Degree of DG of Veterinary and Food Board 20.10.2020 no.121.

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) :

Statistical data about registered rabies cases in animals are available from 1950. Arising from compulsory vaccination of cats and dogs since 1953, also extermination of stray animals, dog-mediated rabies was eradicated for year 1959. No case of disease was reported from 1960 to 1967.
Sylvatic rabies reached Estonian territory from year 1968 and spread rapidly all over the country including islands. Main reservoirs of the disease are red foxes and raccoon dogs.
Since 1968 until end of last century, the average number of rabies- positive cases had varied usually between 150 and 300 per year. In the beginning of running century, in years 2000-2005, the number of rabies cases grow very quickly, reaching up to 814 cases in year 2003 (with 315 cases in foxes and 362 cases in raccoon dogs). Rabies trend dynamics in years 1968-2011 can be followed by chart 1 in Annex.
The structure of rabies infections across species has been relatively stable over these years: farm animals accounted for 6-7%, dogs and cats for 9–23% and wild animals for 71–84% of all the cases of illness. Red foxes have composed majority of rabies cases of wildlife , but year-by -year number of raccoon dogs infected with rabies has aggravated, composing around 50% of all rabies infections from year 2002 until 2006.
There has been immense general improvement of rabies situation in Estonian territory from the beginning of oral vaccination (ORV) of wildlife in part of territory in autumn 2005. Since year 2006, a sudden decrease of rabies cases in all areas could be observed, due to start of OV campaigns in total territory of country. In 2007 only 4 positive cases of rabies infection were diagnosed. In 2008 three positive rabies cases were found in the beginning of the year: sheep in Rapla county, fox and dog in Harju county (see figure 2 in Annex). Above mentioned have been the last rabies cases in basic area of Estonia until nowadays.
Thereof, the only rabies cases occurred have been three rabid foxes found in summer 2009 (see Figure 3 in Annex) in Põlva and Võru county and one raccoon dog in January 2011 in Põlva county drifting ~1km from Estonian Republic –Russian Federation land border in south-east (see Figure 4 in Annex).
Despite of intensified risk-based surveillance of target animals, no rabies cases has been diagnosed since then. The last mortal case of rabies in humans was registered in Estonia in 1986.
In early April 2013 Estonia declared that as its county complies with the conditions to be considered a rabies free country in accordance with the Terrestrial Animal Health Code (2012) of OIE, the Republic has regained its rabies-free status.

ORV area in Estonia has been in consistent decrease.
In years 2006-2010 the whole territory of the country was treated as ORV area (45,226 km^2 in total)
In years 2011-2014 ORV was carried out in the buffer-zone with neighboring countries infected then-Latvia and Russia, (ORV area 9,325 km^2 in total, see Figure 5 in Annex)
Starting from spring 2015, due to achievement of Latvian Republic officially rabies free status in 2015,

ORV has been enforced solely in buffer-zone bordering Russian Federation Leningrad Region in north-east and Pskov Region in south-east. (ORV area 6,200 km^2 in total, area suitable for bait-dropping 6,100 km^2 , see Figure 1 in Annex)

While ORV was enforced in total territory of the country bait-uptake level among the target species has been 84% as an average (86 % among the foxes and 83 % among raccoon dogs).
By using Biorad ELISA test, Platelia Rabies II kit with positivity threshold in use 0,5 international units /ml, seroconversion in target species has been 48%, 47% in foxes and 49% in raccoon dogs respectively.

Following vaccine-uptake and seroconversion levels have been reached while ORV has been conducted solely in areas adjacent to Russian Federation:
Bait-uptake level: in total 76% of all investigated animal teeth have showed tetracycline line with a high intensity.
Seroconversion level: in total 46% of blood-samples collected showed rabies antibody titres higher than 0,3 EU/mL with ELISA technique.

Despite Estonia has faced within years of ORV several obstacles and constraints (like tender dispute, disturbances in financing schemes, reductions in budget e.c.), those problematic issues have been solved on time in favorable way to guarantee the sustainability of the Rabies programme. The biggest challenge we have at the present moment is to find explanations of differences in ORV results as latter are showing much lower seroconversion rate than bait uptake rate in target animals since forced replacement of vaccine in use. The results are much lower than expected and targeted, especially taking into account no alterations from vaccination procedures are done.

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) :

The central agency performing supervision over the implementation of the programme is the AFB. Representative of AFB presides over vaccination for whole OV campaign long. Special letter of guidance is laid down for stuff to carry out vaccine-dropping. The aerial bait distribution is checked by bait distribution records (in electronic and paper format). GPS system is used for recording of flight tracks (journey, coordinates, periodicity of flight routs, speed, and altitude from ground). Intense

superintendence is ongoing over storage and transportation of vaccine baits, including physical checks, storage-room and refrigerated lorries temperature out prints (duplicated loggers system in use). Prior the campaigns from every vaccine batch in use 10 baits are sent to Community Reference Laboratory to ascertain existence of proper vaccine titer. Before start of OV, results proving sufficient quality of baits should be available. In case there is evidence of jeopardizing of maintenance of cold -chain at the time of storage or transportation, additional test are taken for laboratory investigations before or at the time of ORV campaign.
Neighboring countries as well as local stakeholders and publicity are informed about vaccination activities in advance.
For controlling the efficacy of OV of foxes and raccoon dogs against rabies three main methods are used: investigation of all rabies-suspected cases and indicator animals of target species to verify virus prevalence, detection of tetracycline marker by testing the teeth of target population, titration of rabies antibodies to identify seroconversion rate (differentiation is done by juveniles and adults).

Relevant reports to EU and international professional unions are prepared timely by Animal Health and Welfare Department of AFB.

In early April 2013 Estonia declared that as its county complies with the conditions to be considered a rabies free country in accordance with the Terrestrial Animal Health Code (2012) of OIE, the Republic has regained its rabies-free status. In accordance with Article 4 (1) of Commission Implementing Regulation (EU) 2021/620, Estonia has also status of rabies-free Member State.
It is our target to maintain rabies-freedom.

In 2018, when we started to use Rabitec, our bait –uptake decreased immediately from 81% in year 2017 (as an average we have had 83% bait –uptake with Rabigen SAG2 in use) to 69% in 2018.
Bait-uptake has remained in the analogous level within last three years course: 69-70-69% in years 2018-2019-2020 correspondingly.
Thus we can expect, the bait -uptake level ~70% could be maintained with present vaccine in use.

What concerns seroconvertion, we are facing worrisome phenomena- year by year we have observed drop in seroconvertion rate of target animals.
In 2017, the last year SAG2 was in use, there were 67% of tested animals seroconverting.
In period 2011-2017 (when SAG2 was used in the buffer area) we had average seroconvertion rate 48%.
In 2018, when we started using Rabitec- seroconvertion rate dropped to 44%, in 2019- 34% and in last year 2020 specific rabies virus neutralising antibodies were detected solely in 30% of tested animals.
Thus, it is complicated to foresee percentage of animals seroconverting, but we hope to have at least 35% of seropositive red foxes and raccoon dogs.

C. Targets

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

Targets for year : **2021**

Country	Region	Animal Species	Type of test	Test description	Number of tests	Expected number of positive results	% positive	
EESTI	Buffer-zone in Estonia	Foxes and raccoon dogs	presence of biomarker	Tetracycline in bones	250	176	70	X
EESTI	Buffer-zone in Estonia	Foxes and raccoon dogs	serological test	ELISA	250	87	35	X
				Totals :	500	263		

Add a new row

Total tests Serological (FAVN) in MS	0
Total tests Serological (FAVN) in TC	0
Total tests Serological (ELISA) in MS	250
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	250
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

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

Targets for year : **2022**

Country	Region	Animal Species	Type of test	Test description	Number of tests	Expected number of positive results	% positive	
EESTI	Buffer-zone in Estonia	Foxes and raccoon dogs	presence of biomarker	Tetracycline in bones	250	176	70	X
EESTI	Buffer-zone in Estonia	Foxes and raccoon dogs	serological test	ELISA	250	87	35	X
				Totals :	500	263		
						Add a new row		

Total tests Serological (FAVN) in MS	0
Total tests Serological (FAVN) in TC	0
Total tests Serological (ELISA) in MS	250
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	250
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

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

Targets for year : **2021**

Country	Region	Animal Species	Category	Test description	Number of tests	Expected number of positive results	
EESTI	Estonia	Suspected wild an	Suspect or dead animals	FAT	350	0	X
EESTI	Estonia	Suspected wild an	Suspect or dead animals	PCR tests	100	0	X
EESTI	Estonia	Suspected wild an	Suspect or dead animals	Virus isolation test	100	0	X
EESTI	Estonia	Suspected wild an	Suspect or dead animals	FAT	1100	0	X
EESTI	Estonia	Suspected wild an	Suspect or dead animals	Sequencing	3	0	X
				Total	1 653	0	

Add a new row

Total tests FAT in MS	1 450
Total tests FAT in TC	0
Total PCR tests in MS	100
Total PCR tests in TC	0
Total tests Virus characterisation tests in MS	0
Total tests Virus characterisation tests in TC	0
Total tests Virus isolation tests in MS	100
Total tests Virus isolation tests in TC	0
Total other tests MS	3

Total other tests TC	0	

Targets for year : **2022**

Country	Region	Animal Species	Category	Test description	Number of tests	Expected number of positive results	
EESTI	Estonia	Suspected wild an	Suspect or dead animals	FAT	350	0	X
EESTI	Estonia	Suspected wild an	Suspect or dead animals	PCR tests	100	0	X
EESTI	Estonia	Suspected wild an	Suspect or dead animals	Virus isolation test	100	0	X
EESTI	Estonia	Suspected wild an	Suspect or dead animals	FAT	1100	0	X
EESTI	Estonia	Suspected wild an	Suspect or dead animals	Sequencing	3	0	X
				Total	1 653	0	

Add a new row

Total tests FAT in MS	1 450
Total tests FAT in TC	0
Total PCR tests in MS	100
Total PCR tests in TC	0
Total tests Virus characterisation tests in MS	0
Total tests Virus characterisation tests in TC	0
Total tests Virus isolation tests in MS	100

Total tests Virus isolation tests in TC	0
Total other tests MS	3
Total other tests TC	0

3 *Wildlife oral vaccination to be carried out*

Targets for year : **2021**

Country	Region / area	Products used	Number of doses	Size of the vaccination area (km²)	
EESTI	Buffer-zone along border with Russ	SPBN GASGAS	248000	6 200	X
		Total	248 000		
				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			0		
Oral vaccine and baits made of SPBN GASGAS strain in MS			248 000		
Total Vaccines distributed			248 000		
Purchase and distribution of oral vaccine and bait in neighbouring TC			0		

Targets for year : **2022**

Country	Region / area	Products used	Number of doses	Size of the vaccination area (km²)	

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

EESTI	Buffer-zone along border with Russ	SPBN GASGAS	248000	6 200	X
		Total	248 000		
				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	0		
		Oral vaccine and baits made of SPBN GASGAS strain in MS	248 000		
		Total Vaccines distributed	248 000		
		Purchase and distribution of oral vaccine and bait in neighbouring TC	0		

(max. 32000 chars) :

Public tender was officiated in early 2021 to obtain sufficient amount of vaccine-baits for year 2021. As a result SPBN GASGAS vaccine baits are used. There will be public tender officiated in early 2022 to find contractor for the year 2022 (and following years if necessary). Despite moderate monitoring results with vaccine in use (sharp drop of bait uptake has been observed when change of vaccine occurred, but in next two years bait-uptake level has remained stable) and taking into account target population has been in decrease for many years, we do not foresee increase in number of baits distributed per km2.

(max. 32000 chars) :

4 Official control of oral vaccines to be carried out

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

Targets for year : **2021**

Country	Number of batches distributed	Number of batches controlled by the CA	Number of virus titrations performed	
EESTI	4	4	4	X
Total	4		4	
			Add a new row	
		Vaccine titration tests in MS	4	
		Vaccine titration tests in TC	0	

Targets for year : **2022**

Country	Number of batches distributed	Number of batches controlled by the CA	Number of virus titrations performed	
EESTI	6	6	6	X
Total	6		6	
			Add a new row	
		Vaccine titration tests in MS	6	
		Vaccine titration tests in TC	0	

D. Detailed analysis of the cost of the programme

The blocks are repeated multiple times in case of first year submission of multiple program.

To facilitate the handling of your cost data, you are kindly requested to:

1. *Fill-in the text fields IN ENGLISH*
2. *Limit as much as possible the entries to the pre-loaded options where available.*
3. *If you need to further specify a pre-loaded option, please keep the pre-loaded text and add your clarification to it in the same box.*

Costs of the planned activities for year : 2021

1. Delivery

Cost related to	Specification	Number of units	Unitary cost in EUR	Total amount in EUR	Union funding requested	Cofinancing rate	Requested Union contribution in EUR	
Sampling	The information of the finding of dead/hunted foxes, raccoon dogs and jackals in the framework of passive surveillance	1 450	10	14500	yes	75	10 875	X
Sampling	Their 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	1 450	40	58000	yes	75	43 500	X
Sampling	The information of the finding of healthy hunted foxes, raccoon dogs and jackals in the framework of active surveillance (monitoring of oral rabies vaccination)	250	5	1250	yes	75	937,5	X
Sampling	Their 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)	250	15	3750	yes	75	2 812,5	X

2. Testing

Cost related to	Specification	Number of tests	Average cost per dose in EUR	Total amount in EUR	Union funding requested	Cofinancing rate	Requested Union contribution in EUR	
Testing	Serological test: FAVN – MS	0	55.5	0	no	75	0	X

Testing	Serological test: FAVN – TC	0	55.5	0	no	100	0	X
Testing	Serological test: ELISA – MS	250	7.24	1810	yes	75	1 357,5	X
Testing	Serological test: ELISA – TC	0	7.24	0	no	100	0	X
Testing	FAT - MS	1 450	20.16	29232	yes	75	21 924	X
Testing	FAT - TC	0	20.16	0	no	100	0	X
Testing	Presence of biomarker (Tetracycline in bones) - MS	250	21.07	5267.5	yes	75	3 950,63	X
Testing	Presence of biomarker (Tetracycline in bones) - TC	0	21.07	0	no	100	0	X
Testing	Vaccine titration test-MS	4	99.94	399.76	yes	75	299,82	X
Testing	Vaccine titration test-TC	0	99.94	0	no	100	0	X
Testing	PCR tests - MS	100	35	3500	yes	75	2 625	X
Testing	PCR tests - TC	0		0	no	100	0	X
Testing	Virus isolation test - MS	100	105.36	10536	yes	75	7 902	X
Testing	Virus isolation test - TC	0	105.36	0	no	100	0	X
Testing	Virus characterisation test - MS	0	163.1	0	yes	75	0	X
Testing	Virus characterisation test - TC	0	163.1	0	no	100	0	X

3. Vaccination

Cost related to	Compensation of	Number of units	Unitary cost in EUR	Total amount in EUR	Union funding requested	Cofinancing rate	Requested Union contribution in EUR	
Vaccination	SAD Bern - vaccine and bait - MS	0		0	no	75	0	X
Vaccination	SAG2 - vaccine and bait - MS	0		0	no	75	0	X
Vaccination	SAD B19 - vaccine and bait - MS	0		0	no	75	0	X
Vaccination	SAD Clone attenuated	0		0	no	75	0	X
Vaccination	SPBN GASGAS	248 000	0.81	200,880	yes	75	150 660	X
Vaccination	Distribution of oral vaccine - MS	248 000	0.4	99200	yes	75	74 400	X
Vaccination	Purchase and distribution of oral vaccine and bait in neighbouring TC	0		0	no	100	0	X

4.Other costs

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

Cost related to	Specification	Number of units	Unitary cost in EUR	Total amount in EUR	Union funding requested	Cofinancing rate	Requested Union contribution in EUR	
Duly justified measures	Awareness campaign	2	4000	8000	yes	75	6 000	X
				Add a new row				
			Total with Union funding request (€):	436,325.26	including		327,243.95	
			Total without Union funding request (€):	0			= requested EU contribution in €	

Costs of the planned activities for year : **2022**

1. Delivery

Cost related to	Specification	Number of units	Unitary cost in EUR	Total amount in EUR	Union funding requested	Cofinancing rate	Requested Union contribution in EUR	
Sampling	The information of the finding of dead/hunted foxes, raccoon dogs and jackals in the framework of passive surveillance	1 450	10	14500	yes	75	10 875	X
Sampling	Their 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	1 450	40	58000	yes	75	43 500	X
Sampling	The information of the finding of healthy hunted foxes, raccoon dogs and jackals in the framework of active surveillance (monitoring of oral rabies vaccination)	250	5	1250	yes	75	937,5	X
Sampling	Their 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)	250	15	3750	yes	75	2 812,5	X

2. Testing

Cost related to	Specification	Number of tests	Average cost per dose in EUR	Total amount in EUR	Union funding requested	Cofinancing rate	Requested Union contribution in EUR	
Testing	Serological test: FAVN – MS	0	55.5	0	no	75	0	X

Testing	Serological test: FAVN – TC	0	55.5	0	no	100	0	X
Testing	Serological test: ELISA – MS	250	7.24	1810	yes	75	1 357,5	X
Testing	Serological test: ELISA – TC	0	7.24	0	no	100	0	X
Testing	FAT - MS	1 450	20.16	29232	yes	75	21 924	X
Testing	FAT - TC	0	20.16	0	no	100	0	X
Testing	Presence of biomarker (Tetracycline in bones) - MS	250	21.07	5267.5	yes	75	3 950,63	X
Testing	Presence of biomarker (Tetracycline in bones) - TC	0	21.07	0	no	100	0	X
Testing	Vaccine titration test-MS	6	99.94	599.64	yes	75	449,73	X
Testing	Vaccine titration test-TC	0	99.94	0	no	100	0	X
Testing	PCR tests - MS	100	35	3500	yes	75	2 625	X
Testing	PCR tests - TC	0		0	no	100	0	X
Testing	Virus isolation test - MS	100	105.36	10536	yes	75	7 902	X
Testing	Virus isolation test - TC	0	105.36	0	no	100	0	X
Testing	Virus characterisation test - MS	0	163.1	0	yes	75	0	X
Testing	Virus characterisation test - TC	0	163.1	0	no	100	0	X

3. Vaccination

Cost related to	Compensation of	Number of units	Unitary cost in EUR	Total amount in EUR	Union funding requested	Cofinancing rate	Requested Union contribution in EUR	
Vaccination	SAD Bern - vaccine and bait - MS	0		0	no	75	0	X
Vaccination	SAG2 - vaccine and bait - MS	0		0	no	75	0	X
Vaccination	SAD B19 - vaccine and bait - MS	0		0	no	75	0	X
Vaccination	SAD Clone attenuated	0		0	no	75	0	X
Vaccination	SPBN GASGAS	248 000	0.81	200,880	yes	75	150 660	X
Vaccination	Distribution of oral vaccine - MS	248 000	0.42	104,160	yes	75	78 120	X
Vaccination	Purchase and distribution of oral vaccine and bait in neighbouring TC	0		0	no	100	0	X

4.Other costs

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

Cost related to	Specification	Number of units	Unitary cost in EUR	Total amount in EUR	Union funding requested	Cofinancing rate	Requested Union contribution in EUR	
Duly justified measures	Awareness campaign	2	4000	8000	yes	75	6 000	X
				Add a new row				
			Total with Union funding request (€):	441,485.14	including		331,113.86	
			Total without Union funding request (€):	0			= requested EU contribution in €	

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) :

Authorized veterinarians or veterinary officials perform the sampling of rabies suspected animals (~350 suspects per year). In case sample is collected by authorized veterinarians, they are paid by the budget of Agriculture and Food Board (AFB). As number of samples collected from suspected animals has been in continuous decrease within last 10 years course, in 2016 and in 2019 relevant Regulation of Minister of Agriculture was changed to increase the

sum paid to authorized vet. for sampling. As a result, number of suspected cases per year turned to be more, than 300 again.
Estonian Hunters Association is contracted to collect samples from rabies indicator animals and healthy foxes and raccoon dogs shot in ORV area for monitoring ORV effectiveness. Two contracts are concluded with Estonian Hunters Organization: one to collect head samples from indicator animals from total territory of country (foxes and raccoon dogs found dead including road kills, hunted with signs of sickness, hunted with unnatural behavior; number of samples is up to 11 00 individuals/per year); the other one to obtain head and blood samples from healthy hunted animals to monitor ORV in vaccinated area (250 animals). Sampling equipment is provided by the AFB tho hunters.
All payments are made by AFB on contact bases from the State Budget.

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) :

Veterinary and Food Laboratory Tartu Department (central laboratory) performs the testing (with exception of tests of vaccinal titer), cost related are entirely paid by the State Budget. Testing of virus titer of each batch of vaccine before distribution is done by EU reference laboratory ANSES Nancy. Invoices presented by them are paid by AFB from the State Budget.

c) Implementing entities - **compensation**

(max. 32000 chars) :

No compensation has been claimed.

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

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

(max. 32000 chars) :

To find a distributor for the vaccine baits for ORV public procurement is initiated by AFB in early 2022 as previous contract is ending in 2021. The serviceof bait distribution is provided by Pakker Avio aerial company in 2021. If of feasible, multi-annual contract will be targeted. again since 2022. Contract has been undersigned in early spring 2021 with vaccine company to warrant the bait stock for years 2021. Bidder is fully responsible for ensuring the consistency of the supply, proper storage and transportation facilities of baits. Distribution of baits is done by aerial company according to instructions and under direct surveillance of AFB. Both contracts are undersigned by AFB, as AFB is fully responsible for payments from its budget.

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

(max. 32000 chars) :

Awareness campaign will be carried into force in vaccinated and surrounding areas just before and at the time of distribution activities: special commercials in TV and radio stations (in Estonian and Russian language), advertisements are published in local newspapers, press releases and running information in Internet spots. AFB will implement the campaign and pay for it. Leaflets and bulletins to re-alert publicity and animal owners about need to vaccinate pet animals against rabies and follow importation procedures shall be prepared and published, as well as radio, TV and social media campaigns enforced on the same issue. Free of charge mass vaccination campaigns for companion animals have been organized in 2019 and 2020 in South-Estonia areas and similar campaign will be enforced in North-Estonia in late summer 2021 as well.

2 Co-financing rate (see provisions of applicable Work Programme)

The maximum co-financing rate is in general fixed at 50%. However based on provisions of Article 5.2 and 5.3 of the Regulation (EU) No 652/2014, we request that the co-financing rate for the reimbursement of the eligible costs would be increased:

☒ Up to 75% for the measures detailed below

☐ Up to 100% for the measures detailed below

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Please explain for which measures and why co-financing rate should be increased to 75% (max 32000 characters)

Concerning the measures of OV programme implemented in Estonia we are applying for co- financing rate for the reimbursement of the eligible costs to be increased up to 75% as Estonia`s gross national

3. 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*

4. 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:

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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

		Attachment name	File will be saved as (only a-z and 0-9 and -_) :	File size
		Annex to 2021-2022 rabies appl, Est.doc	Annexto2021-2022rabiesapplEst.doc	1278 kb
			Total size of attachments :	1278 kb