

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

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- 6) You are invited to submit your programmes in English.

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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) :

This programme is submitted for 1 year (2023). The long term objective of the oral vaccination programme was to eradicate (sylvatic) rabies from wild animals, mainly from red fox (Vulpes vulpes) populations in the whole territory of Hungary. The objectives of the 2023 programme is to improve the unfavourable epidemiological situation of rabies in Hungary, to prevent the reintroduction of the disease from neighbouring areas, to protect domestic livestock and to prevent human cases. Main measures of the programme are oral vaccination of wild carnivores, monitoring of effectiveness of oral vaccination in the vaccianted areas and rabies surveillance in all species (domestic and wild animals) in the whole country.

Oral vaccination against rabies has been performed in different areas of Hungary since 1992, and then gradually extended to larger areas of the country. Between 2004-2006 the bait distribution has been extended over the whole country in the framework of a PHARE project. Since 2007 the eradication, control and monitoring programme is approved and co-financed by the European Commission. In 2007 the vaccination of the whole territory of the country was continued. From 2008, due to the favourable epidemiological situation, oral vaccination was maintained only in a 50 km wide zone along the state borders to neighbouring countries not officially free from rabies until spring 2013. Between 2005-2010 the number of the detected positive cases remained under ten cases. In 2010 10 rabies cases occured in Hungary (plus 1 bat case). In 2011 and 2012 no rabies cases were diagnosed in domestic animals or wildlife (except 3 bats, EBLV-1). In September 2013 rabies was diagnosed in a red fox originating from Bács-Kiskun county, a territory that had not been vaccinated since 2008. In 2013, 24 cases were detected in 3,5 moths. An emergency ring vaccination was implemented in autumn 2013 in a semi-circle (taking advantage of river Tisza as a natural barrier) of 50 km radius around the first detected case. In 2014, 23 rabies cases were detected while vaccination area was extended to the north up to highway M3 (E71) and in this area a double baiting density was applied (40 baits/km2). The epidemic concerned 3 counties (Bács-Kiskun, Pest, Jász-Nagykun-Szolnok), and 47 cases were found in total, of which 4 in domestic animals and 43 in wild animals. After 3 consecutive vaccination campaigns in the infected area, no further cases were found. In 2015, vaccination area was further extended to the north and no rabies cases were diagnosed in domestic animals or wildlife. Only one bat (EBLV-1, Pest county) and one fox was found positive (Békés county, vaccine induced case, confirmed by the EURL as well.) In February 2016, one red fox was found positive in Borsod-Abaúj-Zemplén county. The virus was different from the viruses isolated from the 2013-2014 cases. During the 2016 spring campaign, vaccine baits were distributed in a double (40 baits/km2) density within a cirlce of 50 km radius around the location of the

case. In March 2017, in the same area, a red fox showing neurological symptoms was found positive again. The strain was identical to the one isolated in 2016. Two weeks later, in a farm closely located to the finding place of the fox, rabies was confirmed in two goats (a female and a kid). During the years 2018-2020, no classical rabies cases were detected in Hungary (only EBLV in bats: one case of only EBLV-1, Pest county, January 2018). The rabies situation in Hungary has changed significantly in the meantime, between 26 September 2022 and 24 November 2022, the National Reference Laboratory detected rabies in 3 foxes and 1 dog in Szabolcs-Szatmár-Bereg county, near the Ukrainian border.

In spring 2018, due to problems with the public procurement procedure, vaccination campaign could not be performed in the area of Hungary that was designated for vaccination in the plan submitted for 2018 (the European Commission has been notified about the problem in letter No ÉlfF/268/2018 of 14 March 2018). However, taking into consideration the epidemiological risks, distribution of oral rabies vaccines has been performed within an appr. 30 km radius area (2.240 km2) around Szerencs, the city in Borsod-Abaúj-Zemplén county, where rabies cases were confirmed in spring 2016 (1 fox) and spring 2017 (1 fox and 2 goats).

In autumn 2018, following a new tender procedure, an area of 41.970 km2 has been vaccinated, which is 45% of the territory of Hungary. In 2019 and 2020, vaccination was continued in the same area as in 2018 (41.970 km2).

For the sake of cost-effectiveness, and also considering the favourable epidemiological situation in the country as well as the risk of re-introduction from neighbouring territories, the vaccination area has been reduced in 2021, by only maintaining the vaccination in the counties along the south-eastern, eastern and north-eastern country border. For detailed information of the areas please see Point 2. and map attached.

The programme also includes rabies surveillance and monitoring of effectiveness of oral vaccination. Surveillance (examination of suspect cases and indicator animals) is in place in the whole territory of Hungary and including all susceptible species. Monitoring of effectiveness of oral vaccination is conducted only in the vaccination area. The main target population of oral immunization programme is the red fox population, but in the southern parts of Hungary the number of golden jackals is continuously increasing, therefore golden jackals will be examined as well in the framework of the monitoring programme.

Following the recent public tender for the years 2022 and 2023, the vaccination area of 2022 and 2023 will be the same as that of 2021.

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) :

In year 2023, it is expected not to have any more indigenous rabies cases in domestic animals. However,

the possibility of sporadic cases introduced from adjacent infected areas can not be excluded, but with an appropriate level of population immunity introduced cases are not expected to cause an epidemic. By eliminating rabies we would minimize the risk of the transmission to humans. Furthermore the overall human and animal health level both of Hungary and its neighbouring countries would improve. If sylvatic rabies will be eradicated in the country, the risk of transmission of the virus to domestic animals and through them, or directly, to humans, can be minimized. Therefore oral vaccination of wild carnivores contributes to human health status of the country. It is rather a matter of general human safety, than a matter of economics, unlike in case of some other co-financed eradication programmes (eg. the eradication of some cattle disease may promote trade of live animals or animal products and thus contribute to national economics etc., but this is not the case with rabies). However, to avoid unneccessary expenses, the programme is planned in such way that it will be implemented only in the areas where this is reasonable, and the vaccination area will be (hopefully) gradually reduced as the rabies situation in the region improves.

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) :

In 2021-2022, vaccination area was reduced, taking into consideration the favourable progress of rabies eradication in Croatia.

The vaccination area in 2023 will be the same as in 2021-2022.

☑ Vaccination shall be maintained In the north-eastern part of Hungary in 2021-2022, because of the cases detected in 2016 and 2017 (also considering the vicinity to Ukraine).

☑ Vaccination will be continued in the southern and eastern part of Hungary in 2021-2022 along the country borders with Serbia and Romania and Ukraine to avoid reintroduction of the disease from non-free countries (according to EFSA Scientific Opinion 4164/2015)

Area of vaccination and monitoring of effectiveteness of OV in 2021-2022 covers 27.423 km2 and involves 6 counties of Hungary: Bács-Kiskun, Békés, Borsod-Abaúj-Zemplén, Csongrád, Hajdú-Bihar, Szabolcs-Szatmár-Bereg (and also a small area of Baranya county is included, which administratively belongs to Baranya, but geographically it is adjacent to the vaccinated part of Bács-Kiskun county).

Rabies surveillance is conducted in the whole territory of Hungary, not only in the vaccinated areas. It includes testing of domestic animals with neurological signs or attacking people, as well as wild animals found dead or showing abnormal behaviour.

Please see attached map: 2021-2022-2023 vaccination area.

(Our cooperation with Ukraine on oral vaccination in a buffer zone in Ukraine won't be continued in 2023 because certain third countries can directly apply for the EU funding of rabies eradication as from 2023

therefore vaccination of the Ukrainian buffer zone should no longer be included in the Hungarian cofinanced programme.)

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 in Hungary is a disease subject to obligatory notification.

Article 18., paragraph (1), point f) and Article 51., paragraph (1) of the Hungarian Act No XLVI of 2008 on the Food Chain and its Official Control (AFCOC)

Article 18., paragraph (1):

Keepers of animals shall:

f): notify forthwith the food chain supervisory authority and the private veterinarian of any animal infected with a disease, or suspected to be infected, and shall have the infected or suspected animal examined and, in the case of epizootic animal diseases, carry out the instructions given by the food chain supervisory authority or the private veterinarian for the treatment of the animal or animals in question, or to prevent any further spreading of the disease, and to carry out the obligations prescribed in the emergency measures applied;

Article 51., paragraph (1): The notifiable animal diseases are specified in legislation adopted for the implementation of this Act.

Article 1., paragraph (3), Article 3, paragraph (5) and Annex 1 of Decree No 113/2008 of Ministry of Agriculture and Rural Development (MARD) on the order of the notification of animal diseases Article 1., paragraph (3): Annex 1 contains the notifiable animal diseases.

Article 3., paragraph (5): Who perceive a stray dog, cat or animal living in the wild behaving abnormally, shall notify as well.

Annex 1 to Decree No 113/2008 of MARD: Notifiable animal diseases,

Section A: Diseases affecting terrestrial animals point 35. Rabies

Article 13. of Decree No 164/2008 of the MARD on detailed rules of the protection against rabies Article 13.: In addition to the notifying commitments described in the separate legislation concerning the notifiable animal diseases, and to the advising commitments described in Article 18. paragraph (1) point f) of the AFCOC

a) the percipient must notify to the hunting authority foxes or other wild mammal animals behaving unnaturally, and the fact of a cadaver of a dead fox run over by a vehicle or wasted away due to unknown reasons to the animal health authority;

b) the person responsible in accordance with Article 19. of the AFCOC must ensure that no other animal or unauthorised person can get into contact with the dead animal until the removing of the cadaver of the dead fox, or rather until the provision of the official veterinarian;

c) the animal being suspected to be diseased or behaving unnaturally must be quarantined in a place where there is no possibility to have contact with other animals, if the quarantine is possible at all and can be conducted without any danger.

Annex 1 of Decree No 81/2002 of MARD on veterinary duties in the prevention of zoonoses Annex 1., Section I.: Notifiable zoonoses point g) rabies (lyssa)

3.2. Target animals and estimation of the animal population

(max. 32000 chars) :

The main target animal population of the oral vaccination campaigns is the red fox (Vulpes vulpes) population, but there are also increasing populations of golden jackals (Canis aureus) and a minor population of raccoon dogs (Nyctereutes procyonoides) present in Hungary. The raccoon dog population is not significant, but the golden jackal population is increasing in number and gradually spreading to the north. As the jackal is a competitor species of the red fox, it is expected that in some areas there will be more jackals than foxes. Moreover, although jackals are a susceptible species, very few data are available about their role in rabies epidemic and the effectiveness in OV in this species. The target number of animals to be examined to control effectiveness of OV will be 4 foxes/100 km2/year in the vaccination area, but jackals will be also accepted as a proportion of the samples submitted by the hunters and tested for tetracycline and antibodies in the framework of monitoring of effectiveness of OV. It must be mentioned, that according to hunters, it is more difficult to hunt jackals than foxes.

The estimated size of the red fox population in Hungary is cca. 60 500 foxes (estimated in February each year, before reproductive season, without offspring, and officially published in summer each year). The distribution of the population is quite even in the country, with somewhat higher densities in the plain areas.

The estimated size of the golden jackal population of Hungary is cca. 15 300 heads (estimated in February each year, before reproductive season, without offspring, and officially published in summer each year). The distribution of the species in the country is uneven. The species intruded into Hungary from the south, and currently the major part of the population lives in the south-western part of the country, but it is continuously spreading to the northern and eastern parts, where it can be observed in a lower number.

The target populations for passive surveillance are the populations of all animal species susceptible for rabies, and passive surveillance is in place not only in the vaccination area, but in the whole territory of Hungary. In the co-financed programme, targets are set only for the most commonly tested species, but of course all suspect animals and all animals causing human injury of any species will be tested.

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) :

Surveillance:

Rabies surveillance is conducted in the whole territory of Hungary. All species of domestic and wild animals are tested for rabies if they showed abnormal behaviour or neurological signs, or caused human injury before their death. Wild animals found dead are to be tested for rabies as well. Routine diagnostics of rabies in all animal species is carried out in three laboratories of the Veterinary

Diagnostic Directorate (VDD) of the National Food Chain Safety Office (NFCSO): a central laboratory in Budapest, which is the NRL for Rabies, and two regional laboratories in Debrecen and in Kaposvár.

Available diagnostic methods: -FAT - direct immunfluorescence (fluorescent antibody test -FAT) of imprints of the brain with a monovalent anti-nucleocapside conjugate, - real time RT-PCR (Wakeley et al., 2005) - conventional PCR -RTCIT - isolation of the virus in the neuroblastoma cells cultures, with N2A cells and Fujirebio monoclonal globulins (Fujirebio Diagnostics, Inc.)

FAT positive results are confirmed by:

- real time RT-PCR

- conventional PCR

- RTCIT

- Sequencing (Sanger et. al., 1977)

In case of human contamination, FAT negative samples are examined beside these above mentioned methods with:

- real time RT-PCR - RTCIT

In every rabies positive case the virus will be sequenced but because this is only performed from positive cases, and due to the low number of positive cases in recent years, the number of such tests cannot be estimated in advance. Therefore no target will be set and no financial contribution is requested for sequencing.

Monitoring:

The efficiency of oral vaccination shall be monitored by laboratory methods. According to the Hungarian national legislation the number of samples to be collected is four foxes per 100 km2 in a year, in accordance with the WHO and EFSA recommendations. Accordingly, 2 foxes/50 km2 (only from the vaccination area) shall be collected per campaign. Foxes are shot by licensed hunters who submit the whole body of the fox to the veterinary authority for laboratory testing. Hunters are legally obliged to submit the samples by an official decision issued by the competent county government office and payed 7000 HUF/cca. 19 EUR (excl. VAT) for this activity. During the pre-campaign meetings organized in each county, the hunters responsible for shooting the foxes for monitoring of effectiveness of OV are called upon to shoot the suspect foxes and other suspect wild animals as well.

The target tables include jackals because they indicate the number of animals to be tested, being either foxes or jackals. The number of animals to be tested in the vaccination area is 4 animals (fox or jackal)/100 km2/ year. Submitting golden jackals for testing is an option for hunters, however, each hunting organization is allowed to submit jackals only up to 50% of the sample number calculated by their territory (2 animals/100 km2/campaign). The number of golden jackals is increasing, but hunters report that golden jackals are more difficult to hunt than foxes and in some areas golden jackals are completely absent. For the above reasons, in order to monitor the effectiveness of the ORV, the target number of golden jackals to be tested set based on the number of golden jackals tested in the previous hunting year. However, on country level the number of jackals tested shall not exceed 25% of the total sample number.

The tests for monitoring the efficiency of the oral immunization of foxes are also carried out in the laboratories of the VDD, from foxes (and, as of 2016, golden jackals) shot within the vaccination area, with the following methods:

- transversal tooth section from jaw – test for the presence of tetracycline biomarker (test for bait uptake) - serological test (ELISA) of blood samples – test for the presence of anti-rabies antibodies (this test is carried out only in Budapest. The regional labs forward the blood samples to the NRL), (- direct immunfluorescence test (fluorescent antibody test -FAT) of imprints of the brain – test for exclusion/confirmation of rabies – this test was routinely performed from foxes shot for monitoring purposes until summer 2021 (until the end of the 2021 spring sampling period). Experts of the European Commission discouraged to continue this activity (see letter of the Health and Digital Executive Agency of the European Commission on 28 September 2021). Since autumn 2021, foxes shot for monitoring purposes are not tested for rabies any more). However, we would like to point out that between 26 September 2022 and 24 November 2022, the National Reference Laboratory detected rabies in 3 foxes and 1 dog in Szabolcs-Szatmár-Bereg county, near the Ukrainian border. Of the above animals, 2 foxes were asymptomatic animals, which were shot within the framework of an epidemiological measure (herd control and monitoring programme), and in their case the rabies virus was detected only because we ordered FAT and (if necessary) PCR testing of foxes shot in Szabolcs-Szatmár-Bereg county within the framework of the enhanced epidemiological measures.

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) :

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Oral vaccination is performed two times a year: in spring (preferably first half of April) and in autumn (prefarably first half of October). One campaign is performed in approximately 10-14 days (in case of favourable weather conditions).

Bait density to be achieved is 20 baits/km2 in the vaccination area. Distribution of vaccine baits is not carried out in the urban areas (town, villages, etc.), in the areas of water (lakes, rivers, etc.), areas of public roads (roads, highways, etc.) and railways.

The vaccinated area in 2023 will be 27.423 km2 and the number of baits to be distributed per campaign is cca 550.000 doses.

Vaccines will be distributed with the use of airplanes, but in some specific areas manual distribution is performed as well.

Aerial distribution:

Aerial distribution is the main method for distribution. The target bait density is 20 baits/km2 (gross). Distribution of vaccine baits will be performed with fixed-wing airplanes (since 2003 different types of CESNA airplanes are used). Distance between flying lines is usually 1000 m, the flying speed is between 100 and 120 km/h. In each new campaign flying lines are rotated by appr. 90 degree compared to the lines of the previous campaign. The distributor companies and the personnel of the airplanes are instructed not to drop baits in densely inhabitated areas and water bodies.

All airplanes are equipped with GPS systems to record the flight routes and the dropping of baits. The aerial distribution is planned with mapping software and controlled using GPS. Flying lines and points of

bait dropping are digitally recorded and stored.

GPS is used for flying navigation and following the planned flight routes. On each airplane the vaccine dropping machine is controlled by a computer connected with GPS. Flying lines and the dropping places of each vaccine bait are recorded by a computer (connected with the GPS system). The flight routes are also recorded by an independent system and the data are sent automatically to the central competent authority (CCA). The contractor for distribution reports on a daily basis via telephone to CCA, and also sends the GPS data of the given day during the vaccination campaign. The CCA checks at the end of each day of the campaign with the contractor which flight lines have been completed and how many baits have been distributed on the given flight lines. During the vaccination campaign CCA is able to control the distribution work on a daily basis.

Manual distribution:

Manual distribution is only supplementary. (Less than 1% of all the baits are distributed manually.) Manual distribution is applied in some specified areas where flying is prohibited or where a more precise distribution of baits is needed (i.e. oil and power plants /Algyő/ and railway transfer zones /Záhony/). Manual distribution is carried out by qualified wildlife biologists. The bait density is 20 baits/km2. The number of baits to be used for manual distribution per campaign is less than 2000 doses per campaign. Manual distribution is recoreded GPS as well (tracks only).

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) :

Article 2., point a) of Decree No 164/2008 of the MARD on detailed rules of the protection against rabies:
A rabid animal means an animal in which unquestionable laboratory tests have confirmed rabies.
Article 16. of Decree No 164/2008 of the MARD on detailed rules of the protection against rabies:
(2) The laboratory appointed under Paragraph (1) (the NRL) shall in any positive case of rabies communicate promptly the test results to the veterinarian who sent the sample and, if a human has been bitten, to the chief district veterinarian and to the competent human health authority.

Article 10., paragraph (3) of Decree No 164/2008 of the MARD on detailed rules of the protection against rabies: In case of reinfection emergency vaccination (ERV) shall be carried out in an area of at least 50 km radius around the place of the diagnosed case.

In 2013, following an unexpected rabies outbreak occurred in the non-immunized part of Bács-Kiskun county, an emergency ring vaccination (ERV) -in a circle of 50 km radius- was implemented in the infected territory during the autumn campaign. An increased number of samples (8 foxes/100 km2) had to be taken during the autumn sampling period from the area of 2013 ERV and from the new areas to be vaccinated in 2014. This active surveillance was aimed to identify geographical spread of the disease. In 2014, vaccination area was extended up to highway E71. The new vaccination areas were covered with a double bait density (40 baits/km2, 500m flight distance) and the regular areas have been vaccinated with a normal dose (20/km2).

In 2016, following one case in a vaccinated territory (Borsod-Abaúj-Zemplén county), vaccination was performed with a double bait density (40 baits/km2, 500m flight distance) within a circle with 50 km radius around the place of confirmation. In the whole territory of the infected county, and in the areas of two neighbouring counties (Szabolcs-Szatmár-Bereg and Hajdú-Bihar) within the 50 km circle, double sample numbers were prescribed (4 foxes/100 km2) in the spring sampling period to detect the

presence of the disease.

Between 26 September 2022 and 24 November 2022, the National Reference Laboratory detected rabies in 3 foxes and 1 dog in Szabolcs-Szatmár-Bereg county, near the Ukrainian border. These are the first cases since 2017, when the last rabid animal was identified in Hungary. The cases have been reported on ADIS within 24 hours.

The cases are located within the regular fox oral vaccination (ORV) area. Nevertheless, as a precautionary measure, an emergency ORV has been ordered in the affected four surrounding game management units along the Hungarian border with Ukraine. This emergency vaccination is carried out together with the regular autumn ORV campaign and is scheduled to this area on 3-8 October 2022, which means a double dose of vaccine is dropped on this territory.

In addition to the above, our authority ordered the following measures:

- the normal rabies surveillance system was strengthened in the affected and surrounding game management units, which means that all killed foxes (both shot and trapped) should be sampled for laboratory tests for 6 months,

- increased hunting or other means of depopulation of foxes

 enhanced passive surveillance in the whole territory of Szabolcs-Szatmár-Bereg county – all dead bodies of foxes and other wild animals must be sampled and sent for laboratory diagnostic test
 dogs must not be let outside the premises for 90 days, and compulsory vaccination of domestic cats and other carnivorous pets against rabies with immediate effect.

Similarly to the above, in the upcoming years of the programme, in case of detecting a positive case in a non-vaccinated area, an emergency ring vaccination (ERV) is intended to be carried out in an area of at least 50 km radius around the place of the diagnosed case with a double vaccination density (40 baits/ km2, 500m flight line distance). In case of detection of a positive case within the vaccination area, baiting density may be doubled in a 50 km circle as well. Additionally, based on the proposal of the NFCSO, an increased number of foxes to be shot and tested may be ordered upon the decision of the CVO.

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) :

A rabies awareness campaign was launched by the central veterinary authority in 2016: a dedicated homepage has been created, leaflets and billboards have been produced, and a TV spot has been produced, which has been broadcasted on several media platforms in the upcoming years. For 2023, we plan to continue the awareness campaign as follows:

Key messages:

1. Notification of rabies suspicion to the local or central veterinary service. The main aim of the campaign is to maintain a good passive surveillance by encouraging reporting of rabies suspect animals and rabies indicator animals (especially wild carnivores) found dead.

2. Prevention of human cases. Information is given about the importance of medical care in case of animal bites.

3. Call the attention of pet owners to have their dogs and cats vaccinated against rabies (in case of dogs, this is also obligatory in Hungary). The importance of vaccinating dogs and cats, and thus preventing the transmission of the disease to humans is explained.

Tools in 2023:

1. distribution of leaflets (eg. events, in schools, city halls, tourist attractions, zoo, national parks, pets' clinic, hunter's shop etc.) by post in the risk areas (cost of distribution by post)

2. road panels, posters and citylights – to be placed mainly in the risk areas (cost of production, cost of exhibition)

3. online, printed and radio advertisements (cost of production and publication)

4. homepage dedicated for rabies (www.veszettsegmentesites.hu) – already in operation

5. social media platforms (Facebook, Instagram) - sharing news, information and guidance material on the platform of National Food Chain Safety Office

6. educational video mini-series about rabies – already produced and published (homepage, YouTube) 7. National Food Chain Safety Hotline (general hotline, not specifically for rabies) – already in operation 8. meetings with hunters in the area of oral vaccination

As the rabies situation in Hungary has changed significantly in the meantime (between 26 September 2022 and 24 November 2022, the National Reference Laboratory detected rabies in 3 foxes and 1 dog), the planned awareness campaign will continue to play a key role in the prevention of human cases and the protection of the Hungarian domestic animal population.

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) :

1.National authorities

1.1. National Food Chain Safety Office (NFCSO)

1.1.a. National Food Chain Safety Office, Animal Health and Animal Welfare Directorate, Epidemiology Department

-Determines the date and territorial expansion of the immunization

-Keeps contact with the counties, the different national authorities (hunting authority, public health authority, disaster management), with the Ministries of other countries and with the EU Institutes -Controls the implementation of the programme

-Coordinates (and supervises) the implementation procedures carried out by the different Directorates

of the NFCSO

1.1.b. National Food Chain Safety Office, Laboratory Directorate, Control Laboratory of Veterinary Medicinal Products

-Responsible for registration and quality control of vaccines

-Responsible for organisation of public procurements related to the eradication programme -Responsible for supervision of implementation of vaccine distribution

-The national coordinator of the implementation of the programme is appointed from this Directorate.

1.1.c. National Food Chain Safety Office, Veterinary Diagnostics Directorate (3 laboratories)

-Responsible for transport of the samples from the collecting places to the labs

-Responsible for carrying out laboratory tests

-Responsible for laboratory data collection

-The central laboratory in Budapest is the National Reference Laboratory for rabies (NRL)

-FAT and tetracycline detection is also carried out in the two regional laboratories in Debrecen and in Kaposvár, while serology (ELISA) is only performed in Budapest (the regional labs forward the blood samples).

1.2. County Government Offices

1.2.a. Government Office of each vaccinated County, Department responsible for Food Chain Safety and Animal Health:

-Orders restriction on movements of dogs and prohibits of grazing during the vaccination campaigns in accordance with national legislation

-Official veterinarians supervise the cold storage of vaccines and the work implemented at the airfields -Determines for each hunting association the number of foxes should be shot in the sampling period following each vaccination campaign

-Organizes the collection of fox samples from the hunters

-Imposes penalties on hunting associations not fulfilling the required number of fox samples

1.2.b. Government Office of each vaccinated County, Department responsible for Agriculture Directorate, Hunting and Fishing

-Informs the hunters about their duties

-Contributes in determination for each hunting association the number of foxes should be shot in a year (based on the size of the area)

1.3. Ministry of Agriculture

1.3.a. Food Chain Control Department, Animal Health Division

-Responsible for Hungarian legislation on animal health issues (e.g.: on rabies)

1.3.b. Natural Resources Department, Hunting, Fishing and Management of Water Supplies Division -Responsible for Hungarian legislation on hunting

-Coordinates and supervises the implementation procedures carried out by the hunting authority

2. Business companies

-To produce vaccine baits

-To distribute vaccine baits (organising the vaccination campaign: holding informative meetings for the stakeholders before each campaign in each vaccinated county, handing over information materials to the hunters and for the inhabitants, handing over sampling equipments to the hunters, paying to the hunting associations for delivering of fox samples.)

3. Hunting associations

-Responsible to inform the inhabitants via distribution of information materials (posters, leaflets) received from the contracted business company and posted on the hunting area and at local

governments of the hunting area

-To shoot and deliver fox samples to the animal health authority

2. Legal basis for the implementation of the programme

(max. 32000 chars):

Vaccination of red fox population:

Article 8., paragraph (1) of Decree No 164/2008 of the MARD on detailed rules of the protection against rabies: The immunity of the wild fox population agains rabies shall be ensured by oral vaccination in order to prevent rabies in foxes and to combat the disease. The date and regional expansion of immunization shall be determined by the Chief Veterinary Officer.

(2) Oral vaccination of foxes shall be organized by the National Food Chain Safety Office with the involvement of the County Government Offices (the local competent hunting and fishing authorities on county level).

(3) Only vaccine baits with a marketing authorization (MA) in Hungary shall be used for the oral vaccination of foxes.

(4) Vaccine baits shall be distributed from airplanes in accordance with the instructions for use of the vaccine. Vaccine baits shall be placed manually in areas where aerial distribution is not feasible for safety or other reasons.

(5) The competent chief district veterinarian shall order a closure of dogs and ban on grazing in the affected areas for 21 days after the start of vaccination.

Monitoring and surveillance:

Article 9 of Decree No 164/2008 of the MARD:

(1) The efficacy of rabies control shall be monitored with laboratory methods on state expense. Laboratory examinations shall include both the verification of vaccine ingestion and the detection of rabies.

(2) After the completion of vaccination campaigns, four adult foxes per 100 km2 shall be shot every year. (This means in practice 2 foxes/100 km2/campaign). Licensed hunters shall submit the fox corpses to the competent district office which, in turn, shall forward them to the appointed animal health laboratory (in practice, to the laboratories of the NFCSO.)

(3) The number of fox samples to be submitted by hunters shall be specified through a resolution of the competent chief county veterinarian fifteen days before each sampling period on the vaccinated areas.
(4) In addition to the examination of the foxes shot in accordance with paragraph (2), the corpses of the perished foxes and other wild mammals from the whole territory in Hungary shall also be tested for rabies. In particular, the whole bodies of small animals and the heads of big game shall be sent for examination.

(5) In order to improve the method, the animal health and food control service will continuously assess the efficacy of vaccination on the basis of various criteria taken from the fields of animal health, public health, game biology, ecology and ethology.

Vaccines:

Article 8., paragraph (3), and Article 10. of Decree No 164/2008 of the MARD on detailed rules of the protection against rabies: For the oral vaccination of foxes only vaccine baits with MA in Hungary, in accordance with separate piece of legislation should be used.

Article 5., paragraph (1) of Decree No 128/2009 of the MARD on veterinary medical products: Veterinary medicinal products (VMP) – including if mixed to feed - in internal market shall be produced, released, distributed (on market) or utilized in Hungary only with MA, following national (NP) or mutual recognition (MRP) procedure in accordance with Regulation 726/2004/EC. The NP and MRP ensure that in Hungary VMPs could be used only if they match the EU and national professional prescriptions. In case

of vaccination against rabies in red foxes only those vaccines shall be used, which are in accordance with Chapter 2.1.13., point C of the OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, issued in 2008 and the prescriptions laid down in the relevant monograph (PH. EUR. 01/2008:0764) of the European Pharmacopoeia.

Vaccination schemes:

Article 10 of Decree No 164/2008 of the MARD on detailed rules of the protection against rabies Article 10., paragraph (1): Vaccination prescribed in Article 8, paragraph 1 shall be carried out two times (in spring and in autumn) in a year, and shall be carried out for at least two consecutive years. (2): If rabies of human or animal origin has not occured in the previous two years in a county, that county could be declared as free of rabies. Vaccination shall be carried out two more years counted from the last diagnosed case of rabies.

(3): In case of reinfection emergency vaccination shall be carried out in a circle area with min. 50 km radius around the place of the diagnosed case. To prevent reintroduction of the disease, vaccination shall be maintained in a 50 km wide zone along the borders to non-free countries.

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):

In 2011 and 2012 no rabies cases were diagnosed in domestic animals or wildlife (except 3 bats, EBLV-1). In September 2013 rabies was diagnosed in a red fox originating from Bács-Kiskun county, a territory that had not been vaccinated since 2008. In 2013, 24 cases were detected in 3,5 moths. An emergency ring vaccination was implemented in autumn 2013. In 2014, 23 cases were detected while vaccination area was extended to the north up to highway M3 (E71) and in this area a double baiting density was applied (40 baits/km2). After 3 consecutive campaigns in the infected area, no further cases were found. The 2013-2014 epidemic concerned 3 counties (Bács-Kiskun, Pest, Jász-Nagykun-Szolnok), and 47 cases were found in total, of which 4 in domestic animals (2 cattle, 1 goat, 1 dog) and 43 in wild animals (1 roe deer, 42 foxes). Only two of the cases were detected in the frame of active surveillance. In 2015, vaccination area was further extended to the north and no rabies cases were diagnosed in domestic animals or wildlife. Only one bat (EBLV-1, Pest county) and one fox was found positive (Békés county, vaccine induced case, confirmed by the EURL as well.) In February 2016, one red fox was found positive in Borsod-Abaúj-Zemplén county. The virus strain isolated from the sample was different from the strain detected during the 2013-2014 rabies epidemic in Hungary. The case occurred within the vaccination area. In March 2017, in the same area, a red fox showing neurological symptoms was found positive again. The strain was identical to the one isolated in 2016. Two weeks later, in a farm closely located to the finding place of the fox, rabies was confirmed in two goats (a female and a kid). During the years 2018-2020, no classical rabies cases were detected in Hungary (only EBLV in bats: one case of only EBLV-1, Pest county, January 2018).

The rabies situation in Hungary has changed significantly in the meantime, between 26 September 2022 and 24 November 2022, the National Reference Laboratory detected rabies in 3 foxes and 1 dog in Szabolcs-Szatmár-Bereg county, near the Ukrainian border.

As of 21 April 2021 Hungary held a disease free status from infection with RABV (Hungary is listed in Part I of Annex III to the Commission Implementing Regulation (EU) 2021/620), meanwhile our rabies status has changed and the following counties are now free of the disease:

- Baranya County
- Bács-Kiskun County
- Békés County
- Borsod-Abaúj-Zemplén County
- Csongrád-Csanád County
- Fejér County
- Győr-Moson-Sopron County
- Hajdú-Bihar County
- Heves County
- Jász-Nagykun-Szolnok County
- Komárom-Esztergom County
- Nógrád County
- Pest County (including Budapest)
- Somogy County
- Tolna County
- Vas County
- Veszprém County
- Zala County

On 4 February 2022, the OIE (World Organisation for Animal Health) published on its website a declaration on rabies free status of Hungary, which has since been withdrawn.

Bait uptake data:

2013/2014 hunting year: 71% (age determination was only introduced in late 2013) 2014/2015 hunting year: 69,48% (59,50% in juveniles, 93,04% in adults) 2015/2016 hunting year: 74,58% (65,76% in juveniles, 89,96% in adults) 2016/2017 hunting year: 72,50% (62,20% in juveniles, 91,57% in adults) (similar results in jackals) 2017/2018 hunting year: 77,81% (69,16% in juveniles, 95,51% in adults) (similar results in jackals) 2018/2019 hunting year: 76,73% (71,21% in juveniles, 92,31% in adults) (similar results in jackals) 2019/2020 hunting year: 71,47% (64,45% in juveniles, 93,83% in adults) (similar results in jackals) 2020/2021 hunting year: 85,48% (81,16% in juveniles, 95,65% in adults) (similar results in jackals) 2021/2022 hunting year: 82.95% (79.81% in juveniles, 92.94 in adults) (similar results in jackals)

Seroconversion data:

```
2013/2014 hunting year: 24,77% (age determination was only introduced in late 2013)
2014/2015 hunting year: 35,16% (29,94% in juveniles, 47,43% in adults)
2015/2016 hunting year: 44,15% (39,50% in juveniles, 52,22% in adults)
2016/2017 hunting year: 50,59% (45,72% in juveniles, 59,95% in adults) (similar results in jackals)
2017/2018 hunting year: 41,32% (35,44% in juveniles, 53,94% in adults) (similar results in jackals)
2018/2019 hunting year: 37,66% (37,25% in juveniles, 38,71% in adults) (similar results in jackals)
2019/2020 hunting year: 24,63% (18,90% in juveniles, 41,03% in adults) (similar results in jackals)
2020/2021 hunting year: 31,91% (27,85% in juveniles, 41,42% in adults) (similar results in jackals)
2021/2022 hunting year: 28,97% (25.19% in juveniles, 40.31% in adults) (similar results in jackals)
```

Obstacles of the programme:

Unfavourable weather conditions can cause delay in the aerial distribution of vaccines but in such case the CA will be informed by the contractor about the delay. The safety of flight personnel is always considered as a priority.

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 of vaccine distribution:

GPS is used for flying navigation and for to define the exact places of dropping each vaccine. On each airplane the vaccine dropping machine is controlled by a computer connected with GPS. Flight routes and the places of each dropped vaccines are recorded by a computer (connected with the GPS system). During the vaccination campaigns the competent authority controls the implementation of the distribution work on a daily basis. There is and independent flight route recording system in place which sends the flight data automatically to the authority. At the end of each day of the campaign, the contractor for distribution reports on the progress of work via telephone to the CA. The CA checks on the map (flight plan) which flight routes have been completed on the given day and how many baits have been distributed on the given flight lines. Additionally, at the end of each day the GPS data of the flight routes and bait release, recorded by the CA using mapping software (QGIS). GPS data are merged and analyzed during and after the campaign, and after the end of each campaign a meeting takes place where the contractor has to explain all the visible gaps. If there are too many unaccounted number of gaps the contractor has to pay liquidated damages.

Controls on the maintenance of the cold chain:

The winner of the public procurement contract responsible for the supply of the oral vaccines delivers the vaccines to the appointed cold storage facility. At arrival the shipment is examined by the central and local competent authority, by the winner of the public procurement contract responsible for the distribution of the vaccines and by the personnel of the cold storage facility. The company owning the cold storage is responsible for the proper storage (including temperature) of the vaccines. Vaccine storage at the cold store is checked by the local competent authority before transportation to the airfields. The contractor responsible for the distribution of the vaccines during transport to the airport with appropriate vehicles. The cold storage of

Standard requirements for the submission of programme for eradication, control and surveillance vaccines at the airport is regularly checked (and the findings are recorded) by the local competent

vaccines at the airport is regularly checked (and the findings are recorded) by the local competent authority. The central competent authority supervises the above by checking the vaccine storage at the airports.

Titration of all vaccine batches before distribution:

Each batch of oral vaccine will be sampled by the competent authority before distribution. The samples will be tested for quality in a competent laboratory.

C. Targets

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

| Country | Region | Animal Species | Type of test | Test description | Number of tests | Expected number of positive results | % positive | |
|--------------|---------------------|----------------|-----------------------|-----------------------|-----------------|--|------------|---|
| MAGYARORSZAG | Bács-Kiskun | Fox | presence of biomarker | Tetracycline in bones | 153 | 115 | 75 | x |
| MAGYARORSZAG | Bács-Kiskun | Fox | serological test | ELISA | 153 | 69 | 45 | x |
| MAGYARORSZAG | Baranya | Fox | presence of biomarker | Tetracycline in bones | 3 | 2 | 67 | x |
| MAGYARORSZAG | Békés | Fox | presence of biomarker | Tetracycline in bones | 180 | 135 | 75 | x |
| MAGYARORSZAG | Békés | Fox | serological test | ELISA | 180 | 81 | 45 | x |
| MAGYARORSZAG | Borsod-Abaúj-Zemplé | Fox | presence of biomarker | Tetracycline in bones | 185 | 139 | 75 | x |
| MAGYARORSZAG | Borsod-Abaúj-Zemplé | Fox | serological test | ELISA | 185 | 83 | 45 | x |
| MAGYARORSZAG | Csongrád-Csanád | Fox | presence of biomarker | Tetracycline in bones | 138 | 103 | 75 | x |
| MAGYARORSZAG | Csongrád-Csanád | Fox | serological test | ELISA | 138 | 62 | 45 | x |
| MAGYARORSZAG | Hajdú-Bihar | Fox | presence of biomarker | Tetracycline in bones | 167 | 125 | 75 | x |
| MAGYARORSZAG | Hajdú-Bihar | Fox | serological test | ELISA | 167 | 75 | 45 | x |
| MAGYARORSZAG | Szabolcs-Szatmár-Be | Fox | presence of biomarker | Tetracycline in bones | 248 | 186 | 75 | x |
| MAGYARORSZAG | Szabolcs-Szatmár-Be | Fox | serological test | ÉLISA | 248 | 112 | 45 | x |
| MAGYARORSZAG | Bács-Kiskun | Jackal | presence of biomarker | Tetracycline in bones | 17 | 13 | 76 | x |
| MAGYARORSZAG | Bács-Kiskun | Jackal | serological test | ELISA | 17 | 8 | 47 | x |

| stanuaru r | requiremen | its for the st | iomission or p | rogramme for e | eradication, c | control and | Surveilla | ance |
|---------------------------------------|---------------------|--------------------|-------------------------|---------------------------|----------------|-------------|-----------|------|
| MAGYARORSZAG | Baranya | Jackal | presence of biomarker | Tetracycline in bones | 1 | 1 | 100 | X |
| MAGYARORSZAG | Baranya | Jackal | serological test | ELISA | 1 | 1 | 100 | X |
| MAGYARORSZAG | Békés | Jackal | presence of biomarker | Tetracycline in bones | 20 | 15 | 75 | X |
| MAGYARORSZAG | Békés | Jackal | serological test | ELISA | 20 | 9 | 45 | X |
| MAGYARORSZAG | Borsod-Abaúj-Zempl | Jackal | presence of biomarker | Tetracycline in bones | 7 | 5 | 71 | X |
| MAGYARORSZAG | Borsod-Abaúj-Zempl | Jackal | serological test | ELISA | 7 | 3 | 43 | X |
| MAGYARORSZAG | Csongrád-Csanád | Jackal | presence of biomarker | Tetracycline in bones | 10 | 7 | 70 | X |
| MAGYARORSZAG | Csongrád-Csanád | Jackal | serological test | ELISA | 10 | 4 | 40 | X |
| MAGYARORSZAG | Baranya | Fox | serological test | ELISA | 3 | 1 | 33 | X |
| MAGYARORSZAG | Hajdú-Bihar | Jackal | presence of biomarker | Tetracycline in bones | 7 | 5 | 71 | X |
| MAGYARORSZAG | Hajdú-Bihar | Jackal | serological test | ELISA | 7 | 3 | 43 | X |
| MAGYARORSZAG | Szabolcs-Szatmár-Be | Jackal | presence of biomarker | Tetracycline in bones | 2 | 1 | 50 | X |
| MAGYARORSZAG | Szabolcs-Szatmár-Be | Jackal | serological test | ELISA | 2 | 1 | 50 | X |
| | | | _ | Totals : | 2 276 | 1 364 | | |
| | | | | | | Add a new | wrow | |
| | | | Total tests S | Serological (FAVN) in MS | 0 | | | |
| | | | Total tests S | Serological (FAVN) in TC | 0 | | | |
| | | | Total tests S | erological (ELISA) in MS | 1 138 | | | |
| | | | Total tests S | Serological (ELISA) in TC | 0 | | | |
| Total tests Serological (Other) in MS | | 0 | | | | | | |
| | | | Total tests | Serological (Other) in TC | 0 | | | |
| | | Total tests preser | nce of biomarker (Tetra | acycline in bones) in MS | 1 138 | | | |
| | | Total tests prese | nce of biomarker (Tetr | acycline 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

| Country | Region | Animal Species | Category | Test description | Number of tests | Expected number of positive results | |
|--------------|------------------------|----------------------|--------------------------|---------------------------------|-----------------|--|---|
| MAGYARORSZAG | whole country | all susceptible spea | Suspect or dead animals | FAT | 1050 | 0 | X |
| MAGYARORSZAG | whole country | all susceptible spea | Suspect or dead animals | PCR tests | 500 | 0 | x |
| MAGYARORSZAG | Szabolcs-Szatmár-Bereg | Fox | Hunted animals (active s | PCR tests | 248 | 0 | x |
| MAGYARORSZAG | Szabolcs-Szatmár-Bereg | Jackal | Hunted animals (active s | PCR tests | 2 | 0 | x |
| | 1 | | | Total | 1 800 | 0 | |
| | | | | | Add a new | / row | |
| | | | | Total tests FAT in MS | 1 050 | | |
| | | | | Total tests FAT in TC | 0 | | |
| | | | | Total PCR tests in MS | 750 | | |
| | | | | Total PCR tests in TC | 0 | 1 | |
| | | | Total tests Vir | us characterisation tests in MS | 0 | | |

Standard requirements for the submission of programme for eradication, control and surveillance Total tests Virus characterisation tests in TC 0 Total tests Virus isolation tests in MS

| 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

| Country | Region / area | Products used | Number of doses | Size of the vaccination area (km²) | |
|--------------|------------------------|------------------------------------|-----------------|------------------------------------|---|
| MAGYARORSZAG | Bács-Kiskun | SAD Clone attenuated | 163840 | 4 096 | x |
| MAGYARORSZAG | Baranya | SAD Clone attenuated | 4320 | 108 | x |
| MAGYARORSZAG | Békés | SAD Clone attenuated | 194080 | 4 852 | x |
| MAGYARORSZAG | Borsod-Abaúj-Zemplén | SAD Clone attenuated | 186800 | 4 670 | x |
| MAGYARORSZAG | Csongrád-Csanád | SAD Clone attenuated | 142280 | 3 557 | x |
| MAGYARORSZAG | - Hajdú-Bihar | SAD Clone attenuated | 168280 | 4 207 | x |
| MAGYARORSZAG | Szabolcs-Szatmár-Bereg | SAD Clone attenuated | 237320 | 5 933 | x |
| | ' | Total | 1 096 920 | | |
| | | | | Add a new row | |
| | Oral vaccine and ba | aits 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 | 1 096 920 |
| Oral vaccine and baits made of SPBN GASGAS strain in MS | 0 |
| Total Vaccines distributed | 1 096 920 |
| Purchase and distribution of oral vaccine and bait in neighbouring TC | 0 |

(max. 32000 chars) :

In 2022 and 2023 Rabadrop vaccine (MA holder: Bioveta) is used. (In 2021 Lysvulpen vaccine of Bioveta was used.)

4 Official control of oral vaccines to be carried out

| Country | Number of batches distributed | Number of batches controlled by the CA | Number of virus titrations performed | | |
|--------------|-------------------------------|---|--------------------------------------|---|--|
| MAGYARORSZAG | 6 | 6 | 14 | X | |
| Total | 6 | | 14 | | |
| | | | Add a new row | | |
| | Vaco | cine titration tests in MS | 14 | | |
| | Vaccine titration tests in TC | | | | |

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) :

Foxes in the framework of active surveillance (monitoring of vaccination) are shot by licensed hunters (hunting organizations) and delivered to the veterinary authority. The winner of the public procurement (contractor) pays to the hunters for this activity. The National Food Chain Safety Office pays to

the contractor from 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) :

Testing of the official samples is performed by the Veterinary Diagnostic Directorate of the National Food Chain Safety Office (a state laboratory) and is financed from state budget.

c) Implementing entities - **compensation**

(max. 32000 chars) :

Not applicable.

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

(max. 32000 chars):

Vaccines are provided by the winner of the public procurement procedure and are purchased by the National Food Chain Safety Office. The cost of purchase of vaccines is paid from state budget.

Vaccination is performed by the winner of the public procurement procedure (contractor) and paid by the National Food Chain Safety Office from state budget.

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

(max. 32000 chars) :

Awareness activities (such as leaflets, posters, road panels, TV, radio and internet spots etc.) will be designed and purchased by the National Food Chain Safety Office.

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:

Awareness campaign: in order to maintain or increase the current number of animals (suspect animals showing neurological symptoms, indicator found dead or in contact with humans) tested in the frame of passive surveillance, an awareness campaign has been started by the central authority in 2016. The aim of this campaign is to provide information about the disease to the public, and to support the notification of the suspicion of rabies. A homepage has been developed, leaflets were printed, and a TV spot produced and distributed, advertisements were published via online media, road panels, posters, citylights etc. and also an educational video mini-series about rabies was produced.

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 |
|--|---|--|-----------|
| | HU Rabies vaccination area 2021-2022-2023.pdf | HURabiesvaccinationarea2021-2022-2023.pdf | 744 kb |
| | | Total size of attachments : | 744 kb |