Self-declaration of country freedom from Rabies virus by Lithuania

Declaration sent to the World Organisation for Animal Health (WOAH) on 13 June 2022 by Dr Mantas Staškevičius, WOAH Delegate for Lithuania, State Food and Veterinary Service.

1. Introduction

The aim of this declaration is to demonstrate that the Republic of Lithuania fulfils the requirements of a country free from infection with rabies virus in compliance with Article 8.14.2. of the 2021 Terrestrial Animal Health Code (Terrestrial Code). The self-declaration covers the whole territory of the Republic of Lithuania and the populations of both domestic and wild animals. Lithuania had submitted a self-declaration of freedom from rabies in 2015 to WOAH, which was active between 9 March 2015 to 23 October 2015.

The starting date of this self-declaration is 1 June 2022.

2. Disease notification

Rabies has been a compulsory notifiable disease in the Republic of Lithuania since 1960.

Since 1992 in accordance with Article 13 point 3, Article 14, point 1 of Article 15 point 1 Law on Veterinary Activities, every suspicion of contagious animal diseases, including rabies has to be notified to the veterinary authorities. The notification has to be given by the animal owner/keeper, private veterinarian or any other person (e.g. hunter).

All rabies-suspected cases (domestic and wild animals) should be notified to the State Food and Veterinary Service (SFVS). Relevant samples are collected and submitted to the National Food and Veterinary Risk Assessment Institute, which is National Reference Laboratory for rabies in Lithuania. Costs of rabies tests are covered by State budget. In the case of positive rabies case, SFVS notifies the municipality, public health authorities, European Commission, World Organisation for Animal Health (WOAH) and neighbouring countries as well.

Legislation in place for rabies eradication and control indicated in the table below:
Table 1: Legislation in place for rabies eradication and control

<table>
<thead>
<tr>
<th>Legislation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Law on Veterinary Activities of the Republic of Lithuania</td>
<td>Empowers State Food and Veterinary Service to carry out contagious animal disease and certain zoonoses surveillance monitoring and eradication. Indicates, that every suspicion of all contagious animal disease should be notified to SFVS.</td>
</tr>
<tr>
<td>Law on animal welfare</td>
<td>Indicates that pet animals, that are susceptible to rabies, have to be vaccinated against rabies.</td>
</tr>
<tr>
<td>Regulation (EU) 2016/429 of the European Parliament and of the Council of 9 March 2016 on transmissible animal diseases and amending and repealing certain acts in the area of animal health (Animal Health Law)</td>
<td>Sets up general rules of animal health control. Applied directly. Includes rabies in the list of important contagious diseases, indicates that suspected rabies cases have to be reported.</td>
</tr>
<tr>
<td>Rules on control of contagious animal diseases, approved by the Order No. B1-281 of Director of SFVS on 12 April 2006 as last amended</td>
<td>General rules for surveillance and monitoring of contagious animal diseases. Sets up the list of important contagious animal diseases, including rabies.</td>
</tr>
<tr>
<td>Rules on rabies control, approved by the Order No. BI-463 of Director of SFVS on 11 May 2007 as last amended</td>
<td>Detailed rules, how rabies surveillance, and eradication is carried out in the Republic of Lithuania.</td>
</tr>
<tr>
<td>Order No. V-146/Bl-140 of Minister of public health and State Food and Veterinary Service of 28 February 2005 approving the model of the report of the suspected/approved case of animal rabies</td>
<td>Approves the model of the report of the suspected/approved case of animal rabies and indicates that every case must be reported to SFVS.</td>
</tr>
</tbody>
</table>

3. History of the disease

Rabies has been widespread in the whole territory of the Republic of Lithuania. Rabid wild animals are the main reservoir of this disease in the country, and they cause sporadic cases of rabies in domestic animals. Since 1960, 11 people have died of rabies: dogs infected two, foxes — four, raccoon dogs — two, badger — one, cat — one, and the origin of the one case could not be identified.

The main reservoir species of rabies virus and the main animals transmitting the disease are red foxes *Vulpes vulpes* and raccoon dogs *Nyctereutes procyonoides*.

Rabies has been more widespread in wooded areas, but on the other hand wild predators moved as well into areas of human settlements. For instance, foxes and raccoon dogs have become a common sight in urban areas. Under such conditions, the number of reports of cases of rabies in dogs, cats and foxes in the cities and villages has increased. Please see Figure 1. Number of positive cases of rabies from 2005-2022.
The first declaration of freedom from infection with rabies virus published by WOAH was active from 9 March 2015. However, two cases of wild animal rabies (fox and racoon dog) were detected in the Ignalina region on 26 October and 18 November\(^1\) 2015 in the close proximity with the border with Belarus (Figure 2):

Figure 2: Location of positive rabies cases in 2015

No cases of rabies were reported in 2016 and 2017. 1 dead fox was found on 21 September 2018\(^2\) in Vilnius, at the proximity with Belarus border (Figure 3):

Figure 3: Location of positive rabies cases in 2018

\(^1\) FUR 20548 2015 [WAHIS (woah.org)]
\(^2\) IN28393 2018 [WAHIS (woah.org)]
Table 2: No cases of rabies detected since 2017.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of cases in animals</th>
<th>Number of cases in humans</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2018</td>
<td>1 (dead fox was found on 21 September 2018 at the proximity with Belarus border)</td>
<td>0</td>
</tr>
<tr>
<td>2019</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2020</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2021</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2022*</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*Until 1 June 2022

4. Rabies surveillance

Currently, the main objectives of the rabies surveillance programme, which has started in 2004 are as follows:

- early detection of rabies cases
- collect evidence of freedom of the disease
- evaluation of the efficiency of an oral rabies vaccination programme

Passive surveillance is conducted in the whole territory of Lithuania. Passive surveillance is focused on indicator animals (wild animals, foxes and raccoon dogs and other wild carnivores found dead or shot because of showing neurological symptoms or strange behaviour, and domestic animals (dogs, cats and others, showing clinical signs suggestive of rabies) but animals of any species that are involved in human injuries are also tested for rabies. Wild animals (foxes and raccoon dogs) found dead in all territory of the Republic of Lithuania are collected by hunters and authorized veterinarians. Samples of wild animals (foxes and raccoon dogs) which are hunted in the vaccination zone are delivered by hunters. The entire body of the animal is delivered to the National Food and Veterinary Risk Assessment Institute (NFVRVI). Samples from dead domestic animals (bodies of small animals or heads of large animals) suspected to be infected with rabies are delivered by authorized veterinarians to NFVRVI which is a reference laboratory of the Republic of Lithuania.

Samples are tested by direct fluorescent antibody test (DFA).

The information about the numbers of animals tested is below:

Table 3: Number of animals tested as a result of passive surveillance. Samples are tested by DFA. All animals tested were negative except one (indicated by *).

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of tested domestic animals</th>
<th>Number of tested wild animals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dogs</td>
<td>Cats</td>
</tr>
<tr>
<td>2017</td>
<td>23</td>
<td>37</td>
</tr>
<tr>
<td>2018</td>
<td>15</td>
<td>36</td>
</tr>
<tr>
<td>2019</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>2020</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>2021</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>2022**</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

** until 1 June 2022

Active surveillance is performed for the evaluation and monitoring of the effectiveness of oral rabies vaccination (ORV) in the vaccination area. Samples from foxes and raccoon dogs collected (shot) for the purpose by hunters are delivered to NFVRVI and tested for the presence of biomarker tetracyclines (test for bait uptake) and serological (ELISA) test — test for the presence of antibodies)
The information about the numbers of animals tested is below:

Table 4: Number of samples tested and results of active surveillance for rabies from 2017 to 2022.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of samples</th>
<th>Test results (percentage of positive samples)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mandibular</td>
</tr>
<tr>
<td>2017*</td>
<td>1462</td>
<td>1051</td>
</tr>
<tr>
<td>2018</td>
<td>639</td>
<td>496</td>
</tr>
<tr>
<td>2019</td>
<td>664</td>
<td>522</td>
</tr>
<tr>
<td>2020</td>
<td>651</td>
<td>651</td>
</tr>
<tr>
<td>2021</td>
<td>651</td>
<td>651</td>
</tr>
<tr>
<td>2022**</td>
<td>409</td>
<td>388</td>
</tr>
</tbody>
</table>

*Note: oral vaccination was carried out in all territory of Lithuania; therefore the samples were collected from all territory
** until 1 June 2022

5. Measures implemented to maintain freedom in the country

5.1. Oral rabies vaccination programme in wild carnivores

In Lithuania, oral vaccination trials started as far back as 1983, using Russian vaccine-bait systems (using an adapted ERA derivate in fish or meat baits). A 25-50% reduction in animal rabies cases was reported. The first oral vaccination of wild animals was conducted in 1995 in the area of 430 sq. km in Panevezys, Pakruojis and Joniskis districts. The VIRBAC made vaccine SAG-I with tetracycline marker was used.

Over the 5-year duration of the programme (1995-2000), a range of vaccines has been used and variable geographic areas were covered. Overall, oral vaccination has been carried out in more than 8,000 km², with 820,000 baits distributed at various stages of the campaign. Delivery methods have adopted manual distribution (predominantly by hunters) and aerial distribution using fixed-wing aircraft in a few limited areas. Vaccines have included SAG-1 (1995-1997, 1999), Lysvulpen (1998) and Rabifox (2000), all incorporating tetracycline markers. Campaigns have followed a twice-yearly delivery strategy, with baits distributed in March-April and October-November. The distribution of baits relied mainly on manual distribution through hunting clubs.

From 2006, aerial oral rabies vaccination campaign (covering red foxes and raccoon dogs) started using airplanes. The oral vaccination area was approx. 65,000 km² (all territory of Lithuania). Two campaigns have been carried out every year (spring and autumn), 1.3 million baits per campaign are used (i.e. 2.6 million vaccine baits per year). Baits were distributed by four Cessna-type small airplanes at a density of approximately not less than 20 baits/km². The aircraft flying lines were separated by 1,000 m; only near the border with Belarus flying lines were 500 m. LYSVULPEN vaccine (producer- Bioveta, Sad Berne MSV Bio 10 min.1.8 x 106 TCID50 – max.1.8 x 108 TCID50) is used since 2013.

The oral rabies vaccination campaign in all territory of Lithuania was performed from 2006 until 2017.

Since 2018, an oral vaccination campaign is carried out at the 50 km buffer zone at the border with Belarus (20,400 km²). Not less than 25 baits per square km are distributed, flight lines are separated by 500 meters and 505,000 baits are distributed per campaign (1,010,000 per year). The map indicating the buffer zone is below (Figure 4)
M.2. Rabies vaccination in domestic animals
Vaccination of dogs, cats and ferrets against rabies is compulsory in Lithuania in accordance with the Article 20 of point 4 Law of animal welfare. Vaccination of other species is voluntary but can also be ordered by the veterinary authority in the zones where animals infected with rabies have been recorded.

Dogs, cats and ferrets must be microchipped and registered in the Pet animal register within 4 months after birth and, vaccinated against rabies at three months of age. Preventive vaccination of other animals can be performed also. Vaccines used must have marketing authorization in Lithuania.


5.3. Rabies awareness campaign
Information about the rabies situation in Lithuania is provided on the Internet page of SFVS and information about spring and autumn vaccination campaigns is provided on the Internet page and in the paper and electronic newspapers and information is provided to the neighbouring countries.

Rabies day is celebrated, and free rabies vaccination is provided by the private veterinarians.

Publications on the website of SFVS at www.vmvt.lt that are shared about other institutions and media.

Territorial SFVS carry out at least quarterly meetings with private veterinarians and hunters and provide them with information on the disease situation in Lithuania and neighbouring countries and inform them about annual disease surveillance plans and the need to test the suspected/indicator animals for rabies.

5.4. Imports
In the European Union the conditions for non-commercial movement of pet animals have been harmonized as it is laid down in Regulation 998/2003 on the animal health requirements applicable to the non-commercial movement of pet animals and amending Council Directive 92/65/EEC.
At the time of pet movement from non-EU countries, the owner or natural person responsible for the pet animal must be able to present the authorities responsible for checks with an EU pet passport or the veterinary certificate certifying that the animal meets the requirements laid down for such movement.

Where such checks reveal that the animal does not meet the requirements, the competent authorities shall decide:

a) to return the animal to its country of origin.

b) to isolate the animal under official control for the time necessary for it to meet the health requirements, at the expense of the owner or the natural person responsible for it; or

c) as a last resort, to put the animal down, without financial compensation, where its return or isolation in quarantine cannot be envisaged.

The measures are withdrawn when the negative results of samples investigation are obtained or when after 14 days of surveillance of quarantined animals, rabies is rejected.


6. Conclusion

Considering that:

1. Lithuania has been free from infection with rabies virus since October 2018;
2. Rabies is a compulsory notifiable disease. In addition, that any change in the epidemiological situation or relevant events are reported in accordance with Chapter 1.1. of the Terrestrial Code;
3. All susceptible animals showing clinical signs suggestive of rabies are subjected to appropriate field and laboratory investigations;
4. The results of the passive surveillance as well as the data obtained from the samples collected for the purpose of monitoring the effectiveness of oral vaccination (active surveillance) in the last three years demonstrate the absence of circulation of rabies virus in Lithuania;
5. There have been no cases of indigenous acquired infection with rabies virus confirmed in the past 24 months;
6. An effective surveillance system is in place, in accordance with Chapter 1.4. and Article 8.14.12. of the Terrestrial Code;
7. A continuous oral vaccination programme in the bordering zones is in place, with effective vaccine monitoring protocols.

The WOAH Delegate of Lithuania declares that the country complies with the requirements for a country free from rabies as of 1 June 2022 in compliance with the provisions of Chapter 1.6. and Article 8.14.2. of the Terrestrial Code (2021 edition) and the declaration is consistent with the information provided in WAHIS.
Statement to be included in the self-declaration document.

I, the undersigned, [Signature],

the Delegate of

[Signature]

Republic of Lithuania

to the World Organisation for Animal Health (WOAH, founded as OIE), takes responsibility for the self-declaration of freedom [Signature].

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(iii) Any direct or indirect consequences of any nature arising from or relating to the use of the information contained in a self-declaration.

Drawn up on [Signature]

Signature of the Delegate: [Signature]