

## DISCLAIMER

The World Organisation for Animal Health (WOAH, founded as OIE), after performing an administrative and technical screening of a self-declaration concerning the disease-free status of a country, a zone or a compartment ("self-declaration"), as described in the standard operating procedures for self-declarations, reserves the right to publish or not the self-declaration on its website. There shall be no right of appeal from this decision nor any recourse of any kind.

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## Self-declaration of freedom from infection with Newcastle Disease in poultry by Brazil

Self-declaration sent to the World Organisation for Animal Health (WOAH, founded as OIE) on 23 October 2024 by Dr Marcelo de Andrade Mota, WOAH Delegate for Brazil, Director of Animal Health Department, Ministry of Agriculture and Livestock.

### I. Introduction

The objective of this self-declaration is the recovery of Brazil's country freedom from Newcastle disease (ND) in poultry in accordance with relevant provisions of Chapter 10.9 of the WOAH *Terrestrial Animal Health Code (Terrestrial Code)*. The scope of this self-declaration covers the entire country.

The declaration has been in effect since October 23, 2024, 90 days after applying the stamping-out policy in the poultry establishment where ND had been detected on July 17, 2024 ([WAHIS event 5773](#)), as per the standards set forth in Chapter 10.9 of the *Terrestrial Code*.

Prior to this detection, ND had been considered eradicated in Brazil since the last occurrence in 2006 in backyard domestic birds (non-poultry according to the [glossary](#) of the *Terrestrial Code*) in the state of Mato Grosso (currently considered by WOAH as infection with APMV-1 according to 'poultry' definition).

Brazil formally requests WOAH to publish this self-declaration on its website. A statement of responsibility signed by the WOAH Delegate of Brazil is contained in Annex I.

### II. Evidence that ND is a notifiable disease in Brazil

ND is subject to mandatory notification to the Official Veterinary Service (OVS) in Brazil, through [Normative Instruction nr. 50/2023](#), of Ministry of Agriculture and Livestock (MAPA), which established the national list of animal diseases of mandatory notification. Notification of any suspicion of ND is mandatory for every citizen, as well as for all animal health professionals.

#### Structure and role of the veterinary services

The veterinary service in Brazil comprises a chain of command and structures in which the national coordination of animal health is the responsibility of the Animal Health Department (DSA) of the Secretariat of Animal and Plant Health and Inspection (SDA), MAPA. In addition, in each State, MAPA has the Federal Superintendence of Agriculture (SFA), and regional offices with technical and administrative functions.

Each State Government has the competence to organize its own State Veterinary Service (SVS), with technical and administrative autonomy specific to the implementation of animal health policies, as long as they are in conformity with national guidelines and legal acts. The implementation of the animal health policy has its responsibility shared between the different levels of hierarchy of the Federal and State Official Veterinary Service, as well as with the private sector.

SVS is represented by animal health agencies and institutions endowed with their own physical structure, human resources, and legal scope. Each SVS consists of a central, regional, and local veterinary units (LVU). In addition, the OVS command and structure network is complemented by other elements, such as community service offices (CSO), analysis and diagnostic laboratories, and checkpoints for transit inspection of animals and products at strategic points.

The LVUs perform surveillance activities and collect epidemiological and health data and information from different sources in their area of action – one or more municipalities. The information is consolidated, analyzed, and forwarded to regional, state, and national higher-level instances. Immediate information is due in the case of investigation of emergency or exotic diseases, such as ND. All actions performed by the OVS are recorded in specific documents and electronic systems, being available for verification and assessment.

The actions taken within each State are under the direct responsibility of the SVS. However, the work is also directly supervised by MAPA, through the Federal Superintendence of Agriculture (SFA), and by a program of periodical state-level supervision carried out by DSA/MAPA designated professionals.

### III. Eradication of ND in Brazil

For the first time since 2006, and as a result of passive surveillance of avian respiratory and nervous syndrome, Brazil's OVS detected an outbreak of ND (Avian paramyxovirus type 1 - APMV-1) in a broiler farm in the municipality of Anta Gorda, state of Rio Grande do Sul, on July 17, 2024 (Figure 1). The nucleotide sequence obtained for the F gene showed 95.15% identity with the APMV-1 variant Pigeon paramyxovirus 1 (PPMV-1) sequence deposited in GenBank KX097024.1. Infection with PPMV-1 has also been detected in synanthropic birds in the state of Rio Grande do Sul, indicating a probable origin.



Figure 1 – Location of Newcastle disease outbreak in the state of Rio Grande do Sul, Brazil (July 17, 2024).

OVS conducted an epidemiological investigation of the event and implemented the restrictions and measures in accordance with the [Brazilian Contingency Plan for Animal Health Emergencies](#) (the [general plan](#) and specific plan for [High Pathogenicity Avian Influenza \(HPAI\)](#) and [ND](#)). OVS carried out active surveillance cycles in the perifocal and surveillance areas – a protection zone was not implemented – with clinical inspections in all poultry establishments and backyard non-poultry premises in order to identify birds with compatible clinical signs and to raise awareness among the population to report suspected cases. After an initial surveillance cycle in all livestock premises, including commercial poultry and backyard non-poultry, in the perifocal and surveillance areas, three more surveillance cycles were carried out every three days in all the establishments with housed poultry in the perifocal area, and one more surveillance cycle was carried out in all the establishments with housed poultry in the surveillance area with an interval of seven days.

No new suspected cases were identified in the animal health emergency area under this specific surveillance based on clinical inspections; therefore, no samples were collected.

After implementing the measures of stamping-out, official disposal of carcasses, by-products and waste and disinfection of the affected establishment, the fallow period started on July 25, 2024. In accordance with the Brazilian Contingency Plan, on September 12, 2024, the establishment was repopulated with 20% of its housing capacity. OVS has monitored the flock, carrying out clinical inspections and taking samples to assess viral circulation. Having performed two rounds of virological analysis (RT-qPCR) of the flock with negative results, proving the absence of viral circulation, the establishment was authorized to receive its full housing capacity.

#### **IV. Surveillance, including an early warning system for all relevant species in Brazil**

##### **Characterization of poultry population in Brazil**

Poultry production in Brazil is characterized by:

- raising breeder birds within an intensive, controlled, high-performance system. Poultry genetic material producers and exporters are multinational companies, possessing farms that meet high levels of biosecurity.
- commercial broiler raising system overwhelmingly organized around a vertical integration model. This poultry-raising model is based on a partnership in which the agribusiness corporation provides the animals, feed, medications, transportation, inputs and the technical assistance necessary for production; whereas the grower provides the facilities, equipment, water and electricity, and handles the animals (raising and growing) until they are ready for slaughter.
- commercial layer sector mainly comprised of independent producers.

Geographically, broiler production takes place all over the country, but the largest production is concentrated in the three southern states of Brazil (Paraná, Santa Catarina and Rio Grande do Sul), with Paraná being the largest producer and exporter. Breeder farms are also located in all the Brazilian regions, but mostly concentrated in the states of São Paulo, Paraná, Santa Catarina and Rio Grande do Sul. With regard to layer farms for table eggs, the main producing states are São Paulo, Minas Gerais, Espírito Santo and Pernambuco.

All the livestock premises, including poultry and backyard non-poultry, must be registered within the OVS in Brazil.

Additional information can be found in Annex 4 of the [National surveillance plan](#).

##### **National Surveillance Plan**

MAPA maintains an up-to-date surveillance plan for Avian influenza (AI) and ND to monitor and prevent the occurrence of these diseases within the national territory.

The [National surveillance plan](#) for AI and ND is formed of the five components listed below:

- Component 1: Passive surveillance in poultry and backyard non-poultry flocks
- Component 2: Passive surveillance in wild birds
- Component 3: Active surveillance in industrial poultry production
- Component 4: Active surveillance in backyard non-poultry and small-scale poultry commercial flocks
- Component 5: Active surveillance in AI-free and ND-free compartments

##### **Passive surveillance (Components 1 and 2 above)**

Brazil adopts the surveillance model per syndrome for the passive surveillance of AI and ND. These diseases are part of the avian respiratory and nervous syndrome because they present compatible clinical signs.

Notifications of any suspicion of avian respiratory and nervous syndrome must be immediately submitted to the OVS, by any means available, including by the Brazilian electronic system for animal health surveillance - SISBRAVET, so that the investigation process promptly begins. The Official Veterinarian shall respond to the suspected case within 12 hours of the notification. After having clinically examined the suspected animals, the investigation shall be classified as a ruled-out suspected case or a probable case. In response to probable cases of avian respiratory and nervous syndrome, samples are taken for official laboratory diagnosis, an epidemiological investigation is carried out and the establishment remains closed until the investigation is concluded and a negative laboratory report is issued or an emergency state is established when the laboratory report issued is positive for one of the diseases.

For the laboratory investigation of probable cases in poultry and non-poultry flocks, tracheal and cloacal swabs are taken from 30 live birds and organ samples from the digestive, respiratory and nervous systems are collected from five necropsied birds (showing clinical signs or lesions compatible with AI and ND, or from birds that recently died — without evidence of organ autolysis).

All samples from passive surveillance are analyzed exclusively at the official MAPA laboratory in São Paulo (Federal Agricultural Defense Laboratory - LFDA/SP), which is also a WOAHA reference laboratory for AI and ND. The tests performed for ND diagnosis - RT-qPCR for ND virus F and M gene, sequencing and viral isolation - are aligned with the requirements of Chapter 3.3.10 of the WOAHA *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals (Terrestrial Manual)*.

From 2022 to October 15, 2024, OVS in Brazil investigated 3453 notifications of suspected cases of avian respiratory and nervous syndrome (poultry and non-poultry), of which 973 were considered probable cases (cases with sampling for laboratory analysis for AI and ND) and one was confirmed for ND.

#### **Active surveillance (Components 3 to 5 above)**

Active surveillance is based on clinical and epidemiological evaluation as well as serological and molecular investigation. Based on the [National surveillance plan](#), the study design of components 3 and 4 incorporate the concept of risk-based surveillance, while component 5 requires sampling of all AI-free and ND-free compartments certified by MAPA. Active surveillance covers poultry and backyard non-poultry domestic bird populations of the entire national territory.

Surveillance strategies for Components 3 and 4:

Component 3 of the surveillance system is aimed at demonstrating a status of HPAI and ND freedom for industrial poultry production based on epidemiological surveillance and laboratory serological and molecular testing in commercial poultry-raising establishments (i.e. establishments raising hens, turkeys, ducks and quails, totaling at least 1,000 animals). The sample size is calculated at two stages: first, the number of farms to sample (1% prevalence and 95% confidence presumed) and then the number of birds to sample per farm (30% prevalence and 95% confidence); diagnosis parameters used are 95% sensitivity and 100% specificity for PCR for ND. Finally, the choice of farms to sample also took into account the risk of being found positive (susceptibility of species present, biosecurity practices, presence of wild birds, etc.). Sampling is carried out throughout the year.

Component 4 aims mainly to detect AI and ND in backyard non-poultry populations and small-scale poultry establishments with limited local trade (for example, - poultry flocks with less than 1,000 birds) in at-risk areas, considering their greater likelihood of exposure to migratory birds and where such populations were located near to industrial poultry establishments, aiming not only to research virus occurrence but also to provide alerts of occurrence in place with an impact on the country's production systems, allowing for actions for biosecurity reinforcement and protection of industrial poultry production. The surveillance activities take place once a year at the establishments selected based on a risk assessment. More information on the sampling plan for this component is provided in Annex of the aforementioned National Surveillance Plan.

Tests conducted for Components 3 and 4:

Samples of blood serum and pools of tracheal and cloacal swabs are taken for active surveillance. The ELISA test is performed for ND serum screening in component 4. Because of vaccination against ND in the industrial poultry flocks

(compulsory for commercial breeding and laying poultry, but optional for other poultry categories), the serum samples harvested for component 3 do not undergo serological testing for ND.

In component 4, it is possible to detect the presence of antibodies to ND virus in samples from the flocks, which, along with negative results to confirmatory molecular testing, may show a vaccine immune response given that the sampled birds may have been purchased after being vaccinated against ND. The result may also demonstrate the circulation of vaccine strains or nonpathogenic viruses in the population.

All active surveillance testing in components 3 and 4 is performed at the official MAPA laboratories in São Paulo (LFDA/SP), Rio Grande do Sul (LFDA/RS) and Pernambuco (LFDA/PE). The tests performed – ELISA (for component 4), RT-qPCR for ND virus F and M gene, sequencing and viral isolation - are aligned with the requirements of Chapter 3.3.10 of the WOA *Terrestrial Manual*.

Results of active surveillance in Components 3 and 4:

Active surveillance was performed throughout the country from July/2022 to June/2023 in 2,385 breeding, laying and broiler establishments and in 1,064 backyard non-poultry and small-scale poultry establishments, all with negative results for ND.

For the 2023-2024 surveillance cycle, sampling has been completed in all the poultry and backyard non-poultry establishments planned. Final results are still pending, but so far no confirmatory positive results for ND have been identified.

Regarding sampling areas, for component 3, there are seven areas delimited by the State borders. Table 1 presents the number of sampled establishments in 2023-2024 surveillance cycle in component 3 per area and poultry producing type. For component 4, three regions were defined related to the main migratory bird routes that cross Brazil as a whole: Central Brazil (336 sampled small-scale poultry and backyard non-poultry establishments in the 2023-2024 surveillance cycle), Atlantic/Northeast (424 sampled establishments) and Amazon routes (330 sampled establishments).

Table 1 – Number of sampled establishments in 2023-2024 surveillance cycle in component 3 per area and poultry producing type.

<b>Component 3 (2023-2024 cycle)</b>	<b>Broiler</b>	<b>Layer</b>	<b>Breeder</b>	<b>Total</b>
Area 1 (State of Rio Grande do Sul)	258	64	28	350
Area 2 (State of Santa Catarina)	256	51	44	351
Area 3 (State of Paraná)	225	65	60	350
Area 4 (Southeast of Brazil)	122	187	41	350
Area 5 (Northeast of Brazil)	148	200	1	349
Area 6 (North of Brazil)	87	216	2	305
Area 7 (Central-West of Brazil)	176	92	68	336
<b>Total</b>	<b>1272</b>	<b>875</b>	<b>244</b>	<b>2391</b>

Component 5:

For component 5, all the farms with sanitary certification as compartments are included in sampling to detect the presence of AI and ND viruses and all farms are sampled and investigated every 6 months. Epidemiological and laboratory surveillance for AI-free and ND-free compartments requires serological (ELISA) and molecular testing for AI and ND, twice annually. Samples are initially analyzed by public laboratories accredited by MAPA to conduct screening tests, and in the case of non-negative results, the samples are sent to LFDA-SP for confirmatory analysis. In the 2022-2023 and 2023-2024 surveillance cycles, of all seven compartments certified by MAPA, no samples tested positive for gene F of the ND virus.

## V. Measures implemented to maintain freedom in Brazil

a. Biosecurity at farms: MAPA establishes [national minimum biosecurity criteria](#) to be applied by poultry establishments. Additional requirements may be established by state legislation.

b. Vaccination: vaccination against ND is compulsory for commercial breeding and laying poultry establishments and may also be adopted by other poultry establishments. Vaccination is allowed only with vaccines duly registered with MAPA, aligned with the standards described in Chapter 3.3.10 of the *Terrestrial Manual*

c. Awareness programmes: MAPA and State veterinary services implement education and communication actions in animal health specifically designed for the different stakeholders – producers, veterinarians, researchers and the general public – regarding biosecurity and the surveillance of avian respiratory and nervous syndrome. These actions have been intensified since 2023, notably in response to the introduction of the HPAI virus in the region and in Brazil. Communication material produced by MAPA can be consulted [online](#) as well as on a [public dashboard](#) on the results of investigations carried out by OVS.

d. Import control measures:

- For the import of poultry genetic material (hatching eggs and day-old chicks), the general requirements are:
  - that the country, zone or compartment of origin is free of ND in accordance with the criteria established in the *Terrestrial Code*;
  - that the flock of origin has been subjected to regular monitoring and presents a negative result in the RT-PCR test or equivalent diagnostic protocol to rule out infection;
  - in addition to the absence of clinical signs of ND and information on the vaccines applied in accordance with the provisions of the *Terrestrial Manual*, if applicable.
- For imports of ornamental birds:
  - isolation is required for at least 14 days with a negative RT-PCR test result or equivalent diagnostic protocol to rule out infection;
  - information on the vaccines applied in accordance with the provisions of the *Terrestrial Manual*, if applicable;
  - and absence of evidence of transmissible diseases, attested to by a professional from the veterinary authority of the exporting country.

e. Surveillance: [National surveillance plan for AI and ND is available](#) online. The final report of each annual surveillance cycle is also made available on the MAPA [website](#).

f. Contingency plan: A national contingency plan for animal health emergencies and specific guidelines for the identification, containment and elimination of outbreaks of HPAI and ND, with the objective of restoring the health status of the country, can be accessed in detail on the MAPA [website](#).

## VI. Conclusion

Considering that:

- ND in poultry is a notifiable disease in the entire country;
- Stamping-out policy has been applied 90 days prior to this declaration in the only affected establishment, and the measures defined in the Brazilian Contingency Plan for Animal Health Emergencies have been adopted, ensuring the absence of viral circulation;
- The association of all components of the Brazilian surveillance system for ND allow appropriate continuous surveillance in the country, considering epidemiological factors relevant to the occurrence of ND, as per Articles 10.9.22 to 10.9.26 of the *Terrestrial Code*;

**The WOA Delegate of Brazil hereby declares that the country is free from infection with ND virus in poultry in accordance with the provisions of Chapter 10.9. of the *Terrestrial Code* and consistent with the information provided to WAHIS.**



I, the undersigned, Dr. Marcelo de Andrade Mota, Delegate of BRAZIL to the World Organisation for Animal Health (WOAH), takes responsibility for the self-declaration of freedom from infection with Newcastle virus.

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Drawn up on 10/23/2024

Signature of the Delegate:

