

HEPATITIS E IN HUMANS AND WILD BOAR FOOD CHAIN - SECTION B

SURVEILLANCE OF DISEASE IN ANIMALS

Dear participant,
in the context of the OHEJP Matrix, Work-Package 2 (Best-practices and multi-sectorial collaboration) implemented this online questionnaire to collect information about the surveillance of **Hepatitis E** in the **wild boar meat food chain**, in three sectors: public health, animal health, and food safety.

We would like to thank you for your willingness to fill in the questionnaire for the **animal health** sector.

Please find hereby some information regarding personal data processing.

Under Articles 13 and 14 of Regulation (EU) 2016/679, the personal data processing concerns the personal data - name, family name, institution, email address - of those who answer the questionnaire as part of the Matrix project.

The data controller is the legal representative of Istituto Zooprofilattico Sperimentale Abruzzo e Molise "G. Caporale" – Teramo (Italy), www.izs.it - protocollo@pec.izs.it, +3908613321. The contact details of the DPO of the Institute are: dpo@izs.it, +39 0861 3321.

Personal data collected will be processed for purposes connected with the handling of the contractual requirements related to the management of the Matrix project (art. 6, § 1, letter b) of Regulation).

The personal data provided will not be subject to communication and/or dissemination.

All personal data collected will be processed electronically on digital medium using the specific information systems and, in any case, the processing is made exclusively by personnel in charge. All data collected will be retained anonymously on digital.

At any time, data subjects have the right to ask the data controller for accessing their personal data, confirming such data exist, to know the content, the origin, and the processing terms, to request the update, the rectification, the erasure, the transformation into anonymity or the blocking of the data processed in breach of the law or to object the processing. The related request should be made by contacting the Data Protection Officer or the supervisory authority, in particular in the Member State of his or her habitual residence.

* 1. Country

* 2. Contact info of the person replying to the questionnaire

Name and Surname

Institution

E-mail address

HEPATITIS E IN HUMANS AND WILD BOAR FOOD CHAIN - SECTION B

SURVEILLANCE - General

3. Is Hepatitis E in wild boars a notifiable disease* in animals in your country?

* "A disease that, by law, must be reported to public health authorities upon diagnosis." (EJP ORION Glossary)

☐ YES

☐ NO

4. Is there any legal (official) "case definition" and/or "outbreak definition" in your country?

☐ YES

☐ NO

5. If yes, please specify the "case definition" and/or "outbreak definition"

HEPATITIS E IN HUMANS AND WILD BOAR FOOD CHAIN - SECTION B

SURVEILLANCE - Hunted wild boars

6. Is the surveillance* for Hepatitis E in **hunted wild boars** in place in your country?

**Surveillance understood as "Targeted Surveillance that is focused on one or more pre-defined hazards (disease, condition, biological, chemical or physical agent, or event) often this form of surveillance uses diagnostic tests for the detection of particular pathogens (e.g. molecular diagnostic methods)." (EJP ORION Glossary)*

☐ YES

☐ NO

7. Are different types of surveillance activities in place for Hepatitis E in **hunted wild boars** carrying out based on:

	EU legal obligation	National legal obligation	Voluntary based
Official control program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Baseline survey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monitoring program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Research project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outbreak investigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

8. Who are the actors in charge of carrying out surveillance activities for Hepatitis E in **hunted wild boars**?

☐ Hunters

☐ Official Control Authorities

☐ Other (please specify)

9. How often are the samplings performed in **hunted wild boars**?

	Ongoing	Monthly	Quarterly	As required (E.g. as a part of a defined study or during a defined period)
Official control program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Baseline survey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monitoring program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Research project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outbreak investigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

10. If the data collection is “ongoing”, what is the required notification time period?

- ☐ 24 hours
☐ 48 hours
☐ one week
☐ two weeks
☐ Other (please specify)

11. What types of specimens are collected during surveillance activities in **hunted wild boars**?

	Official control program	Baseline survey	Monitoring program	Research project	Outbreak investigation
Liver	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meat juice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gallbladder / bile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Faeces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spleen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blood/serum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

HEPATITIS E IN HUMANS AND WILD BOAR FOOD CHAIN - SECTION B

SURVEILLANCE - Farmed wild boars

12. Is the surveillance* for Hepatitis E in **farmed wild boars** in place in your country?

**Targeted Surveillance that is focused on one or more pre-defined hazards (disease, condition, biological, chemical or physical agent, or event) often this form of surveillance uses diagnostic tests for the detection of particular pathogens (e.g. molecular diagnostic methods).” (EJP ORION Glossary)*

☐ YES

☐ NO

13. Are different types of surveillance activities in place for Hepatitis E in **farmed wild boars** carrying out based on:

	EU legal obligation	National legal obligation	Voluntary based
Official control program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Baseline survey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monitoring program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Research project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outbreak investigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

14. Who are the actors in charge of carrying out surveillance activities for Hepatitis E in **farmed wild boars**?

☐ Farmer

☐ Official Control Authorities

☐ Vet technician/Private Vet

☐ Other (please specify)

15. How often are the samplings performed in **farmed wild boars**?

	Ongoing	Monthly	Quarterly	As required (E.g. as a part of a defined study or during a defined period)
Official control program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Baseline survey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monitoring program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Research project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outbreak investigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

16. If the data collection is “ongoing”, what is the required notification time period?

- ☐ 24 hours
- ☐ 48 hours
- ☐ one week
- ☐ two weeks
- ☐ Other (please specify)

17. What types of specimens are collected during surveillance activities in **farmed wild boars**?

	Official control program	Baseline survey	Monitoring program	Research project	Outbreak investigation
Liver	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meat juice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gallbladder / bile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Faeces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spleen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blood/serum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

18. Do surveillance activities in place for Hepatitis E in **farmed wild boars** also include data collection on:

- ☐ Personnel movement
- ☐ Cleaning and sanitation procedures
- ☐ Other (please specify)

HEPATITIS E IN HUMANS AND WILD BOAR FOOD CHAIN - SECTION B

SURVEILLANCE - Increased mortality

19. Is surveillance* for Hepatitis E in place in case of animals found dead in the **wild boar population**?

**Surveillance understood as "The real-time (or near real-time) collection, analysis, interpretation and dissemination of health-related data to enable the early identification of the impact (or absence of impact) of potential human or veterinary public health threats which require effective public health action". (EJP ORION Glossary)*

☐ Yes

☐ No

20. In case of yes, which organs/tissues of the animal are investigated?

21. Is surveillance for Hepatitis E in place in case of increased mortality in **farmed wild boars**?

☐ Yes

☐ No

22. In case of yes, which organs/tissues of the animal are investigated?

HEPATITIS E IN HUMANS AND WILD BOAR FOOD CHAIN - SECTION B

DATA MANAGEMENT AND LABORATORY METHODS

23. Do you have a National Animal Identification System of **farmed wild boars** in place in your country

- ☐ Yes
☐ No

24. Do you have any survey on the **wild boar population** in place in your country?

- ☐ Yes
☐ No

25. Are data on surveillance activities in place for Hepatitis E in **wild boars**, at different levels, stored in electronic data collection systems at the national level?

- ☐ Yes
☐ No

26. Please, provide the name and contact details of the institution in charge of collecting and storing data coming from surveillance activities at the national level.

Institution

City

Website

27. What kind of information collected during surveillance is shared at national level?

- | | |
|--|---|
| <input type="checkbox"/> Number of confirmed cases | <input type="checkbox"/> Sampler |
| <input type="checkbox"/> Number of suspected cases | <input type="checkbox"/> Date of sample collection |
| <input type="checkbox"/> Number of depopulated animals | <input type="checkbox"/> Place of sample collection |
| <input type="checkbox"/> Number of dead animals | <input type="checkbox"/> Sampling context
(official control program, monitoring, etc.) |
| <input type="checkbox"/> Type of specimen
(faeces, serum, etc.) | |
| <input type="checkbox"/> Other (please specify) | |

28. Please specify the laboratory test used routinely for each type of specimen:

	Liver	Meat juice	Gallbladder / bile	Faeces	Spleen	Blood/serum
Real time RT-PCR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LAMP (loop-mediated isothermal amplification) techniques	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RT- LAMP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Western blot (WB)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enzyme-linked immunosorbent assay (ELISA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enzyme immunoassays (EIA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

29. Are the HEV strains characterized?

☐ Yes

☐ No

30. If yes, which laboratory methods are used routinely to classify HEV strains?

	Always	Sometimes	Never
Nested RT- PCR + sequencing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Whole genome sequencing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

31. How do you share the results of laboratory methods? Please check for each diagnostic test one or more possibilities:

	National level	Sub-national / Regional level	Local level	Intersectorial: human, animal, food	Not shared
Real time RT-PCR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LAMP (loop-mediated isothermal amplification) techniques	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RT- LAMP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nested RT- PCR + sequencing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Whole genome sequencing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Western blot (WB)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enzyme-linked immunosorbent assay (ELISA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enzyme immunoassays (EIA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

32. When are the results shared for each analytical method used?

	Routinely	Outbreak investigation	Research	As required (E.g. as a part of a defined study or during a defined period)
Real time RT-PCR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LAMP (loop-mediated isothermal amplification) techniques	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RT- LAMP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nested RT- PCR + sequencing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Whole genome sequencing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Western blot (WB)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enzyme-linked immunosorbent assay (ELISA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enzyme immunoassays (EIA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

33. Are laboratory data stored in databases at the national level?

- ☐ Yes
- ☐ No

34. If yes, which information on isolates is collected

	National level	Sub-national / Regional level	Local level	Intersectorial: human, animal, food	Not shared
Type of specimen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sampler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Date of sample collection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Place of sample collection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Date of sample receipt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Date of laboratory result	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

35. Please, provide the name and contact details of the National Reference Laboratory in charge of HEV in wild boars.

Institution	<input type="text"/>
City	<input type="text"/>
Website	<input type="text"/>

36. Regarding **farmed wild boars**, information on biosecurity measures in place are shared at which level?

- ☐ Only locally
- ☐ Sub-national / Regional level
- ☐ National level
- ☐ Other (please specify)

37. Basing on the biosecurity measures in place, are farms categorized depending on the level of risk?

- ☐ Yes
- ☐ No

HEPATITIS E IN HUMANS AND WILD BOAR FOOD CHAIN - SECTION B

SURVEILLANCE SYSTEM EVALUATION

38. Has the surveillance system been evaluated?

Please, consider any known evaluations of functioning, performance, organizational aspects, and/or cost-effectiveness.

☐ Yes

☐ No

39. Which method of evaluation has been used?

☐ Auto-evaluation

☐ OASIS method

☐ SERVAL method

☐ Other (please specify)

40. Please, provide contact details of the institution that conducted the surveillance system evaluation.

Institution

City