


PAFF meeting,  
30 November 2022

AHW.A.15.(FB)



# Coordinated One Health surveillance for (re-)emerging zoonotic pathogens in animals and the environment

Trusted science for safe food



**CP-g-22-04.01 Direct grants to Member States' authorities: setting up a coordinated surveillance system under the One Health approach for cross-border pathogens that threaten the Union**

#### POLICY CONTEXT

Many of the important infectious diseases affecting humans that have emerged recently, such as COVID-19, Ebola and the human immunodeficiency virus diseases, are thought to be zoonoses. Scientific literature estimates that approximately 60% of all human pathogens are

## Strengthening

- responsiveness of MS's health systems
- coordination among the Member States

Early detection of Emerging & Re-emerging zoonotic pathogens (not FWB, no AMR)

in animals and the environment

Member States, neighbouring third countries of concern & possibly other third countries

Systematic ongoing collection of data by EFSA

# DG SANTE request to EFSA for scientific and technical assistance (Art. 31)

## I. Design

EU coordinated surveillance system under the OH approach for cross-border zoonotic pathogens that may threaten the Union –  
priority pathogens & surveillance strategies

By Jan 2023

## II. Implement

Implement the collection of surveillance data

2023 - 2026

## III. Review

Regular risk assessment based on surveillance data to review the surveillance priorities and methodologies

## ToR

- Sharing information, data and experience in data collection and surveillance;
- Identifying and mapping expertise in specific areas and issues.
- **To achieve synergies in AHAW RA activities by:**
  - Identifying common themes and areas for mutual collaboration between EFSA and MS, between MS, and between AHAW at national and EU level;
  - Sharing and discussing on-going animal health and animal welfare risk assessment activities to avoid duplication;
  - Sharing and discussing priorities for AHAW RA at national and EU level;
  - Sharing of information related to AHAW RA at national and EU level and AHAW Network through a common digital exchange platform (e.g. Teams and/or SharePoint);
  - Identifying emerging risks when addressing current issues in animal health.
- **To improve the collaboration between animal health and public health on non-foodborne zoonotic and potential zoonotic issues by:**
  - Identifying common themes and areas for mutual collaboration on non-foodborne zoonotic and potential zoonotic issues between animal and public health;
  - Sharing and discussing on-going non-foodborne zoonotic and potential zoonotic issues between animal and public health networks of EFSA and ECDC;
  - Sharing and discussing priorities for joint risk assessments of non-foodborne zoonotic and potential zoonotic issues at national and EU level;
  - Sharing of information and data on non-foodborne zoonotic and potential zoonotic issues between animal and public health through a common digital exchange platform (SharePoint); EFSA may entrust to the network certain tasks, in particular preparatory work for scientific opinions, scientific and technical assistance, and the collection of data.

## One Health subgroup

- New subgroup of existing network established
- Request of nominations of member organisations and participants for each area (animal, public, environmental health) by Advisory Forum



# Workshop participants

24 MEMBER STATES (out of 27)  
intending to apply for direct grant

Austria

Belgium

Bulgaria

Croatia

Denmark

Estonia

Finland

France

Germany

Greece

Hungary

Ireland

Italy

Latvia

Lithuania

Netherlands

Norway

Poland

Portugal

Romania

Slovak Republic

Slovenia

Spain

Sweden



Working group

Contractors: Enetwild  
and Vectornet

ECDC

EC

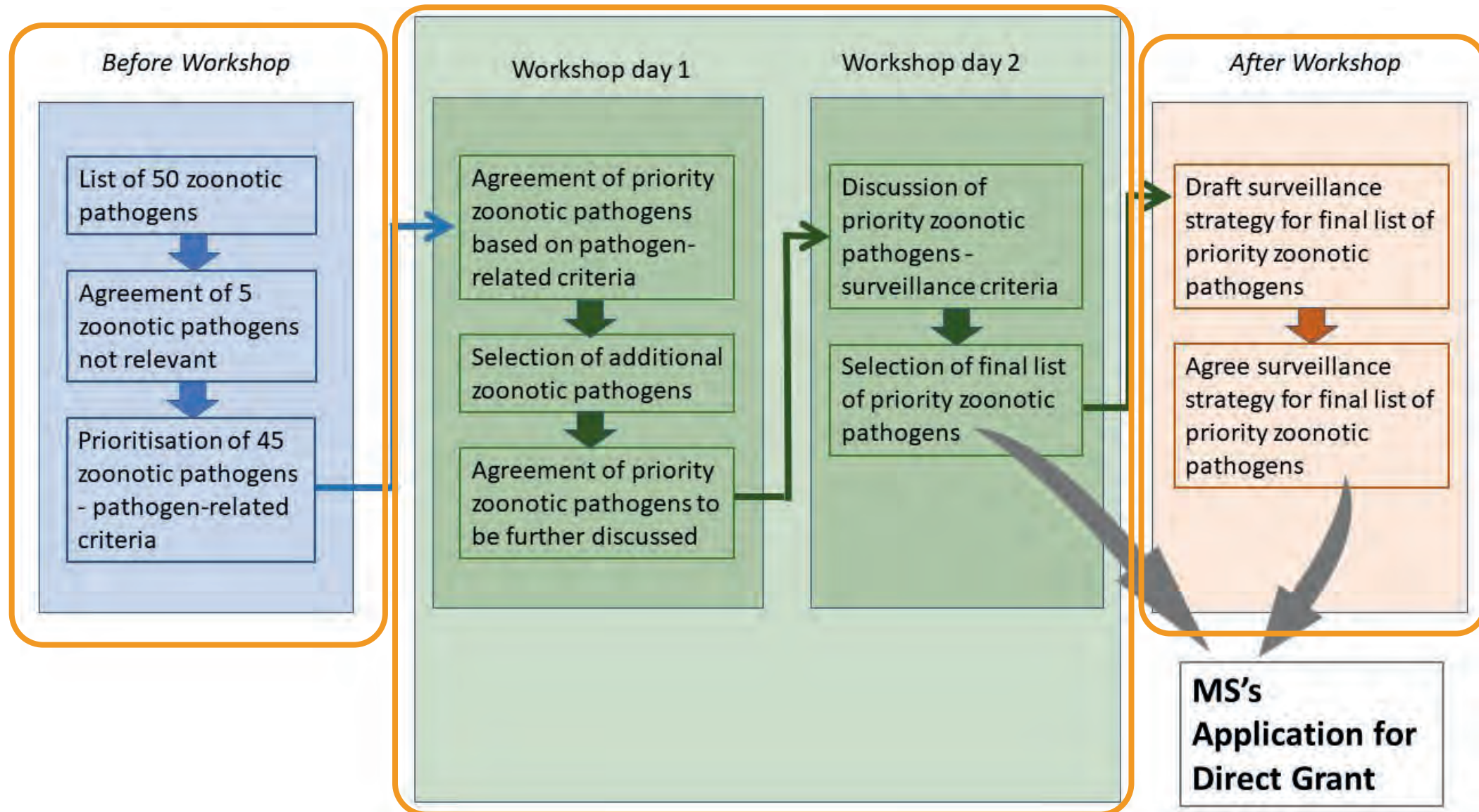
# Areas of nominated participants/alternates

Country	Animal Health	Environmental Health	Food Safety	Public Health
Austria	5	2		2
Belgium	1			1
Bulgaria	2	1		1
Croatia	2		2	3
Denmark	2		1	
Estonia	1			
Finland	4			1
France	2			2
Germany	4			1
Hungary			3	
Iceland				
Ireland	2			1
Italy	5			6
Latvia	4	2		2
Lithuania	2			1
Malta				
Netherlands	2		2	2
Norway	1	1		1
Poland	1			
Portugal	1			
Romania	2			
Slovenia	3			1
Spain	2	1		1
Sweden	4			2
Ukraine				
<b>Total</b>	<b>52</b>	<b>7</b>	<b>8</b>	<b>26</b>

Update on the outcome  
of the prioritization  
exercise



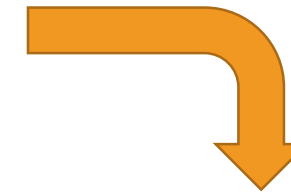
# Design phase – priority zoonotic pathogens





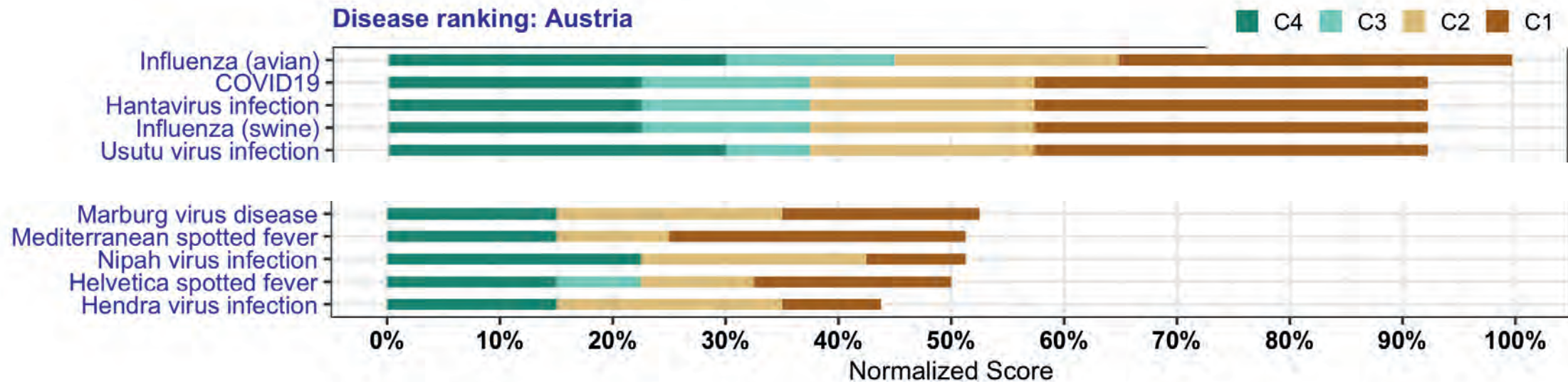
# Pathogen related prioritisation: Presentation of methodology of aggregation of scores

Criteria	Sub-criteria	Question	Score
<b>C1</b> Likelihood of introduction / (re-)emergence	Proximity to the country - Pathways of introduction	ab	$0 \leq s_{ab} \leq 8$
	Drivers of (re-)emergence	c	$0 \leq s_c \leq 2$
<b>C2</b> Epidemic potential	Likelihood of human-to-human transmission	d	$0 \leq s_d \leq 3$
	Adaptability of the agent	e	$1 \leq s_e \leq 2$
<b>C3</b> Conditions for establishment	Conditions for establishment	f	$0 \leq s_f \leq 2$
<b>C4</b> Severity of harm	Impact on human health	g	$1 \leq s_g \leq 3$
	Impact on animal health	h	$0 \leq s_h \leq 3$
	Impact on animal production	i	$0 \leq s_i \leq 3$
	Impact on biodiversity	j	$0 \leq s_j \leq 2$




Standardization  
Aggregation  
Weight

Disease ranking: Austria





## Results: Diseases with high priority



Diseases	Priority	Comments
Influenza (swine)	4	Pandemic potential, no routine surveillance in animals in place, sporadic human cases reported, high reassortment with seasonal flu viruses ongoing
Alveolar echinococcosis ( <i>Echinococcus multilocularis</i> )	3	Severe disease with long incubation period (5-15 years), geographical distribution in wildlife likely expanding in Europe but studies are limited
Rift Valley fever	3	Severe disease and possibility of emergence in Europe (vector established)
Tick-borne encephalitis	3	Evidence of viral spread and human vaccine available, so animal data could inform public health authorities
West Nile fever	3	Evidence of viral spread and risk for blood safety so early detection of viral circulation is important
Crimean-Congo haemorrhagic fever	3	Severe disease and emergence in Europe e.g. Spain
Leishmaniasis	3	No routine surveillance in animals in place, limited data to assess the emergence
Monkeypox	3	No routine surveillance to detect whether the virus would become enzootic
Influenza (avian)	3	Pandemic potential, monitoring in birds in place. Considered for other animal species (foxes, seals, other carnivore, etc)

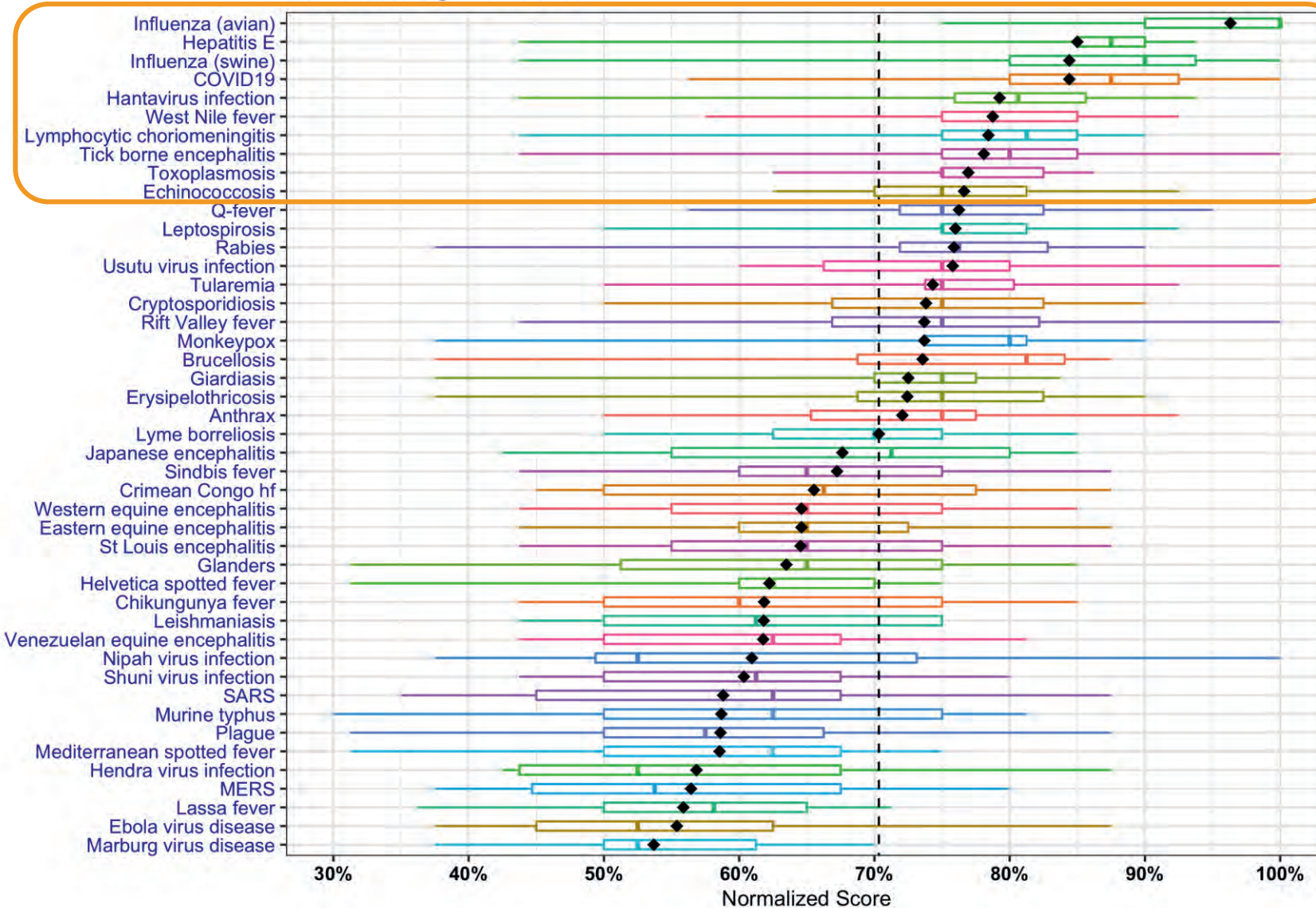
3 = Surveillance in animal would support prevention of human cases in the EU

4 = Surveillance in animal is crucial for public health in the EU



# Pathogen related prioritisation: step 2

Disease ranking: all countries



Combination with ECDC list

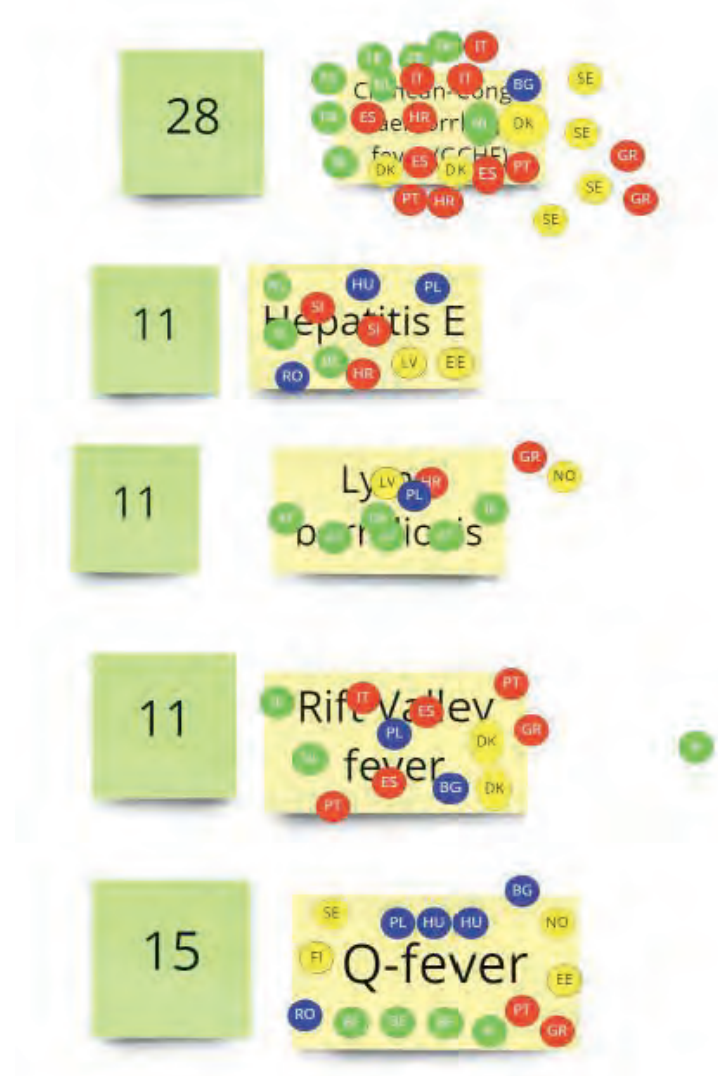


Highly Pathogenic Avian Influenza, Swine Influenza, West Nile Disease, Tick-Borne-Encephalitis and *Echinococcus* spp

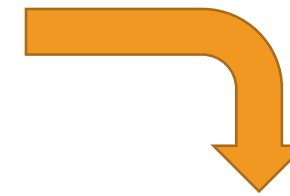
# Additional 5 diseases identified by proportional piling

5 options per country that can be distributed among the remaining 40 pathogens on the initial list.

Color code based on the UN regions to assess regional preferences



Tools used for the process:



5 additional diseases

CCHF, Hepatitis E, Lyme borreliosis, Rift Valley Fever, Q-Fever



**Highly Pathogenic  
Avian Influenza**

**Crimean Congo  
Haemorrhagic Fever**

**Swine Influenza**

**Hepatitis E**

**West Nile Disease**

**Lyme borreliosis**

**Tick-Borne  
Encephalitis**

**Q-fever**

**Echinococcus spp**

**Rift Valley Fever**



## FEASIBLE

*Is it feasible, from a technical point of view, to implement a surveillance system for the pathogen?*

Passive surveillance

Slaughter surveillance

Diagnostic tests

Vector surveillance

Environment sampling

Risk-based surveillance

Citizen science

## BENEFICIAL

*Is there a benefit from early detection of the emergence or re-emergence of the pathogen?*

Early detection

Early warning

Broad surveillance benefits

Contribution to detection of emerging threats

## IMPLEMENTABLE

*Can your country operationalize a surveillance system for the pathogen?*

Workforce

Available infrastructure

Technical expertise

Legal support

Data sharing

Combined surveillance

## CONSTRUCTIVE

*Does a surveillance system for the pathogen contribute to increasing surveillance capacity?*

Cross-sectoral collaboration

Multi-national collaboration

One Health operationalization

Sustainable surveillance framework

# Delphi approach: surveillance related criteria

How feasible, implementable, beneficial and constructive is it to establish a surveillance system for that pathogen?

Green, yellow, red  
- with green being the most and red being the least



	Feasible		Implementable		Beneficial			Constructive				
Highly Pathogenic Avian Influenza	0	0	22	1	0	21	1	6	15	1	18	
Swine influenza	0	0	22	0	2	20	0	6	16	0	10	11

# Delphi approach: surveillance related criteria

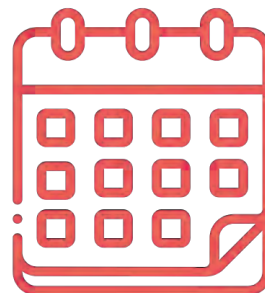
	Feasible			Implementable			Beneficial			Constructive		
Highly Pathogenic Avian Influenza	0	0	22	1	0	21	1	6	15	1		18
Swine influenza	0	0	22	0	2	20	0	6	16	0	10	11
Hepatitis E	0	4	18	1	8	12	2	13	7	3	7	12
CCHF	0	9	13	0	15	7	1	6	15	1	7	13
West Nile Fever	0	0	22	0	0	22	0	0	22	0	1	21
Rift Valley Fever	0	6	16	0	14	8	0	4	18	0	10	12
Lyme borreliosis	0	8	14	0	10	12	3	9	10	1	6	15
Tickborne encephalitis	1	9	12	0	12	10	1	10	11	0	7	15
Echinococcosis	0	2	20	0	7	15	0	17	5	0	9	12
Q-fever	0	2	20	0	4	18	2	1	19	1	6	15



All 10 diseases to the next step



- ISA contractors and WG will make a proposal for a OH surveillance strategy
- The proposal will be shared with MSs by the end of the year
- Discussion and agreement on 16-17 January



JANUARY 2023

