

GF-TADs

GLOBAL FRAMEWORK FOR THE
PROGRESSIVE CONTROL OF
TRANSBOUNDARY ANIMAL DISEASES

Africa



Food and Agriculture
Organization of the
United Nations



World Organisation
for Animal Health
Founded as OIE

African
Union 

RSC

12

France : experience with poultry HPAI vaccination

- ▶ Speaker : Olivier DEBAERE, Crisis Director HPAI/ASF
- ▶ Country or institution : France - Ministry of agriculture
- ▶ 12th March 2025

WHY ?

1. CONTEXT

THE NEED FOR A COMPLEMENTARY TOOL
TO BIOSECURITY, CULLING AND ZONING

HPAI poultry outbreaks per season in FRANCE

(August N to July N+1)

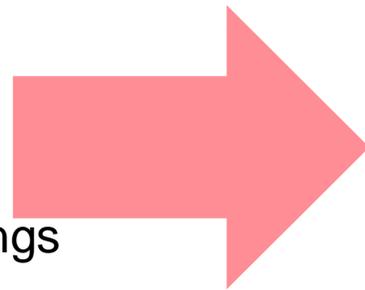


81	488	0	492	1377	402
Augst July					
2015/ 2016	2016/ 2017	2017/2020 3 seasons	2020/2021	2021/2022	2022/2023

Excessive burden on public finances

Season	2015/2016	2016/2017	2020/2021	2021/2022	2022/2023	TOTAL
Outbreaks poultry	81	488	492	1377	402	2840
Million of Poultry killed (included preventive killing)	0,35	4,5 (2,5)	3,3 (2,2)	22 (6)	10 (3,5)	40,15 million poultry killed
State/UE compensation for livestock farmers (million €)	136	175	158	621	552	1 642 million euros

Zoonotic risk
 Moral distress of breeders
 Exhaustion of veterinary services
 No societal acceptance of mass killings
 Excessive burden on public finances



Early 2021 :

we need to vaccinate

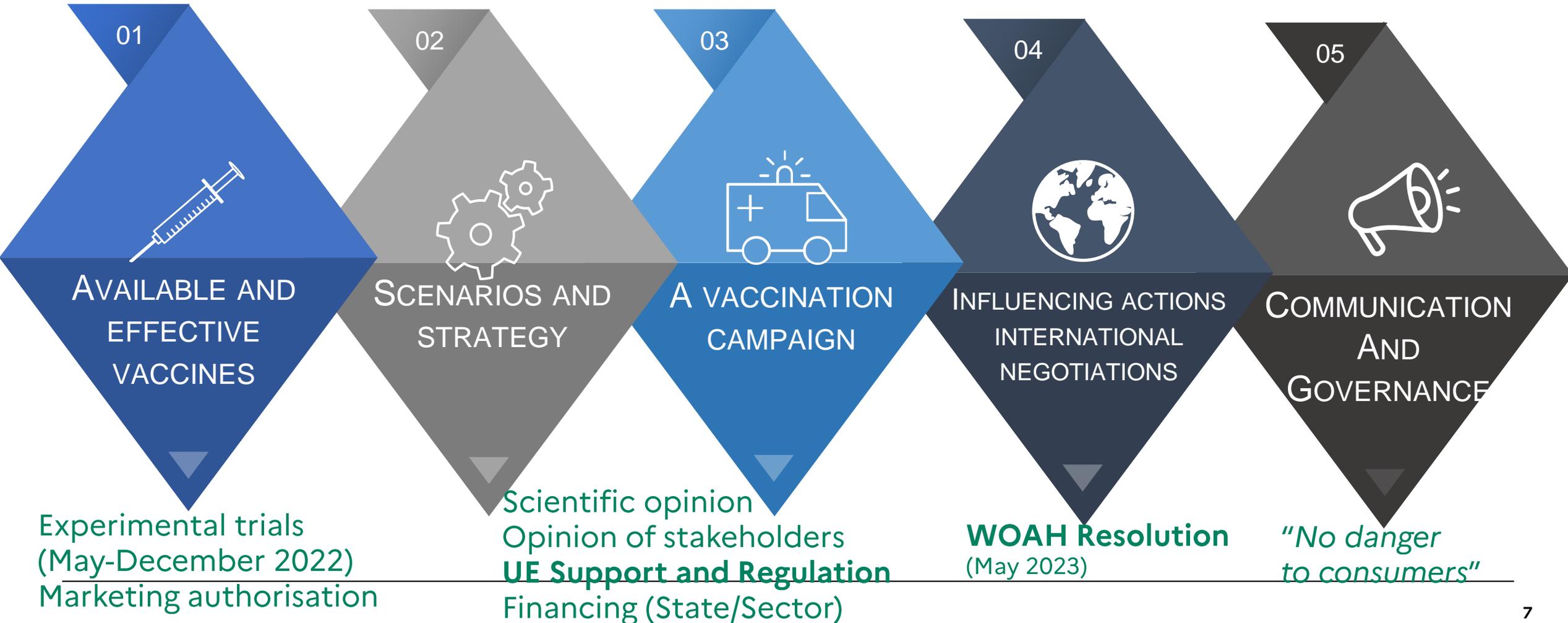
July 2022 : **an approved Roadmap**

2. CHALLENGES

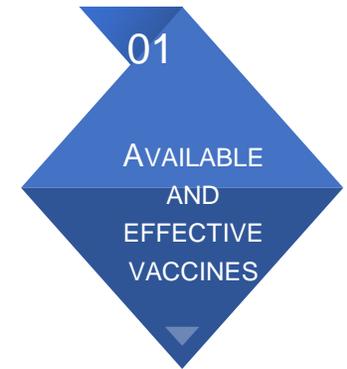
DEFINING A VACCINATION STRATEGY
HPAI VACCINATION ACTION PLAN

Objective: To define a strategy and a plan for vaccination in France

5 main challenges and areas of work



VACCINES



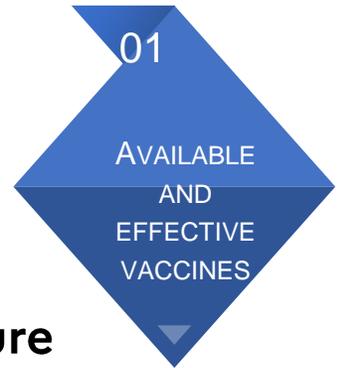
▪ The used vaccine should:

- Be effective on the HPAI clade 2.3.4.4.b strain
 - Have the capacity for a DIVA strategy using the NP ELISA serology
 - Have an authorisation for use, issued by the ANMV (The National Veterinary Medicines Agency)
- = > <https://www.anses.fr/fr/content/médicaments>

Two vaccines on the market meet these criteria

Vaccine and fabricant	Species	Administration route	Conservation	Vaccination at 1 day of age	DIVA ELISA NP serology
Volvac BEST AI+ND BOEHRINGER INGELHEIM	Pékin ducks, Mulard ducks, Muskovy ducks	SC	+5°C	Yes Non	Yes
Vaccin CEVA Respons H5 Ceva Santé Animale	Mulard ducks, Pékin ducks, Muscovy ducks	IM	<ul style="list-style-type: none"> • 24 months ≤-60°C • 28 days ≤-20°C • 74 hours at 2-8°C 	Yes	Yes

The 2 used vaccines



- **Call for tenders (April 2023) : 141 million doses purchased by the Ministry of agriculture**
 - **First batch : 80 million doses**
 - 80 000 000 doses of VOLVAC BEST BI vaccine
 - **Second batch (December 2023) : 61 million doses**
 - 34,188,300 doses of VOLVAC BEST BI vaccine
 - 26,811,700 doses of Ceva Respons vaccine

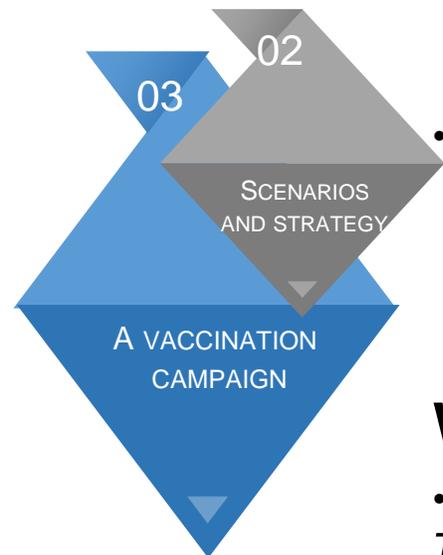
- **2 vaccines used :**
 - VOLVAC BEST **since October 2023**
https://www.anses.fr/fr/system/files/90055_ATU_M_ANNEXE.pdf
 - CEVA RESPONS **since May 2024**
https://www.anses.fr/fr/system/files/90053_ATU_M_ANNEXE.pdf

UE Support

- COUNCIL of the EU (13 May 2022) : Conclusions on highly pathogenic avian influenza (HPAI): a strategic approach for the **development of vaccination as a complementary tool for prevention and control**
- **COMMISSION DELEGATED REGULATION (EU) 2023/361** of 28 November 2022 supplementing Regulation (EU) 2016/429 of the European Parliament and the Council as regards rules for the use of certain veterinary medicinal products for the purpose of prevention and control of certain listed diseases (Annex XIII)

WOAH Support

- **Terrestrial code, chapter 10.4 :**
The use of vaccination against avian influenza may be recommended under specific conditions. Any vaccine used should comply with the standards described in the Terrestrial Manual. Vaccination will not affect the high pathogenicity avian influenza status of a free country or zone if surveillance supports the absence of infection, in accordance with Article 10.4.28., in particular point 2
- **Resolution N°28 (90th General Session May 2023)** on Strategic challenges in the global control of HPAI.
*« The Assembly recommends that :
 10. Members respect and implement the adopted WOAH standards and **recognise compliant use of vaccination without negative consequences on trade**, when the vaccination programme is supported by vaccination monitoring and disease surveillance systems that can demonstrate the effectiveness of vaccination and absence of infection.”*



GUIDING PRINCIPLES FOR DEFINING VACCINATION STRATEGY



Objective

- Vaccination helps to **prevent the spread** of the virus and complements control measures to achieve eradication.

Modalities

- **Preventive vaccination** is the only feasible option at this stage.
- Vaccination should be accompanied by a **strict surveillance system**.
- The vaccines selected will allow the implementation of a **DIVA strategy**.
- The implementation of a strategy will have to be preceded by **coordinated work towards trading partners** at European and international level.

Conditions

- **Biosecurity** is the cornerstone of HPAI control.
- Vaccination, from the moment it is required, must be made **compulsory** except in special cases.
- Vaccination **does not dispense with the elimination of outbreaks**, even when vaccinated.

THE MAIN OBJECTIVES AND TARGETS OF THE VACCINATION STRATEGY



Strategy

- **Preventive** vaccination

Species

- Ducks (Muskovy, Pekin and Mulard)

Zone

- All of mainland France (excluding Corsica)

Period

- All year, starting the first of October 2023

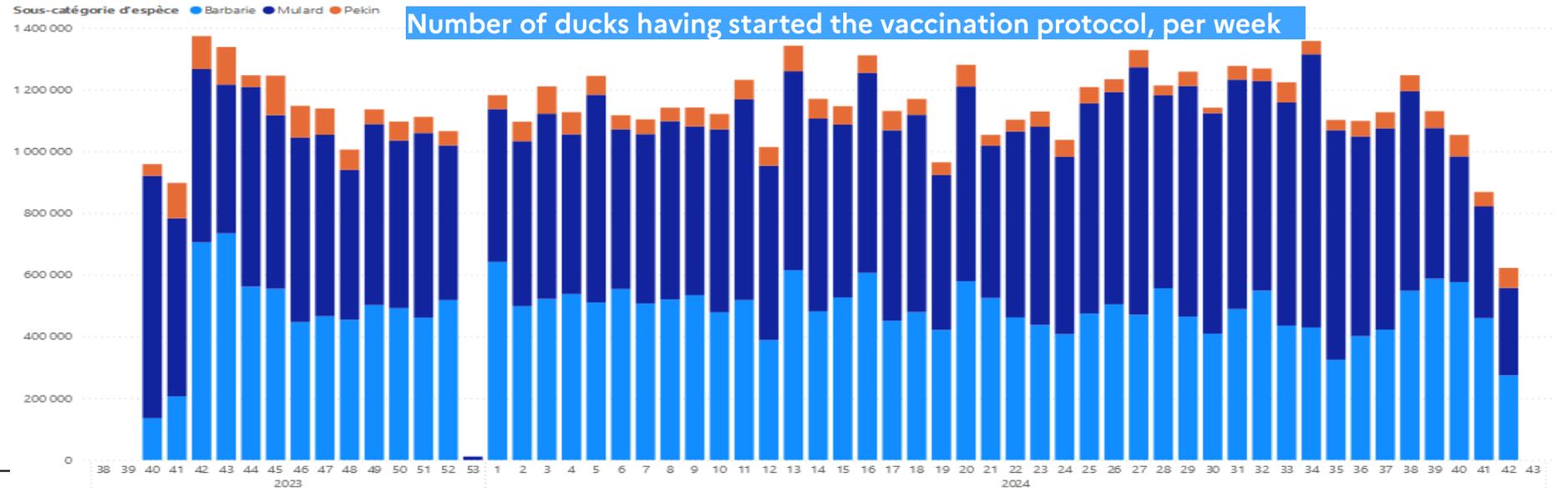
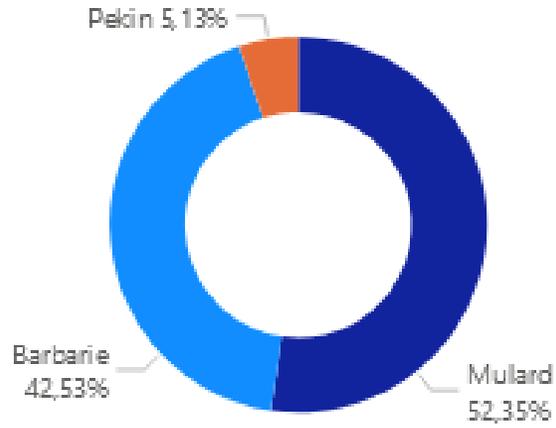
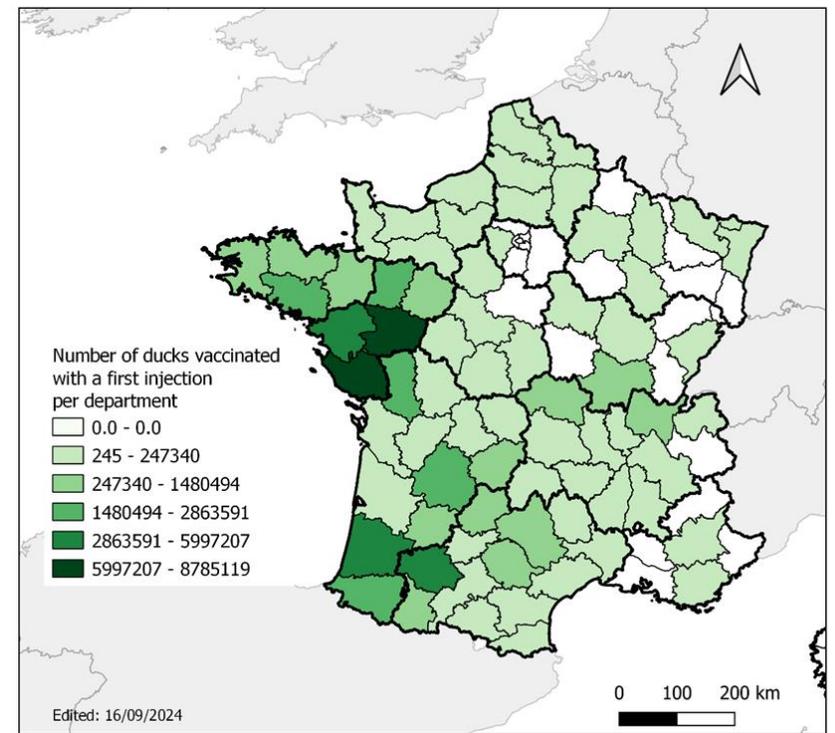
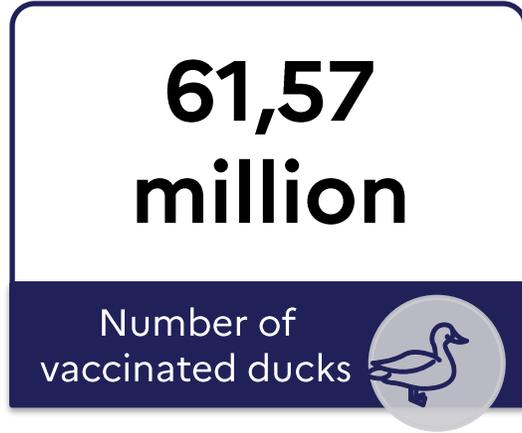
VACCINATION WITHIN A REGULATORY FRAMEWORK

in accordance with EU REGULATION

Species	Production ducks	Breeding ducks
Ducks	Mandatory vaccination for farms with at least 250 ducks	Vaccination prohibited for breeding ducks whose products (ie hatching eggs and day-old ducklings) are exported to another Member State and third countries.
Gallus	Prohibited vaccination	Prohibited vaccination
Other species	Prohibited vaccination	Prohibited vaccination

Vaccination follow-up report

Period of the 1st vaccination campaign
 from 1st October 2023 to 30th September 2024



REINFORCED POST-VACCINATION SURVEILLANCE

03

A VACCINATION
CAMPAIGN

Conditions	Reinforced passive surveillance	Active surveillance
Where?	Epidemiological Unit	Epidemiological Unit
By who?	Breeder or Technician	Official veterinarian
Frequency?	Weekly	Every 30 days: clinical visit + virological analysis
How?	Swabs (tracheal or oropharyngeal swabs) on 5 cadavers <i>Since April 2024 : in case 5 deaths didn't occur during the week, the number of samples can be completed on morbid ducks, up until 5 samples get collected</i>	Swabs on 60 vaccinated ducks (tracheal or oropharyngeal swabs)
Analysis?	RT-PCR gene M virology If the result was positive → screening H5/H7	RT-PCR gene M virology (If the result was positive → screening H5/H7)
Laboratory type?	Recognised laboratory	Approved laboratory

Results : Post vaccination monitoring

03

A VACCINATION
CAMPAIGN

Passive post vaccination monitoring

- Weekly monitoring of up to 5 dead animals in establishments holding vaccinated ducks (PCR analysis)
- Over the period 1st October 2023 – 30th September 2024 :
 - Number of RT-PCR analysis (1 pool = up to 5 swabs) : **21 282**

Active post-vaccination monitoring

- Monthly clinical surveillance of establishments holding vaccinated ducks with sampling of 60 vaccinated ducks (PCR analysis)
- Over the period 1st October 2023 – 30th September 2024 :
 - Number of analysis RT-PCR (1 pool = 5 swabs) : **206 223**

⇒ **No positive HPAI virological results related to the vaccination monitoring**

Financing : 2023-2024 campaign

	Budget share	Paid by
Buying the vaccine	24%	State
Vaccine storage and transport	4%	State
Supervision of vaccination (by official veterinarians)	18%	State
Vaccination operations (by farmer, special teams or veterinarians)	27%	State/Farmers
Monthly visits for active surveillance (by official veterinarians)	8%	State
Active surveillance analyses (approved labs)	17%	State
Passive surveillance analyses (recognized labs)	2%	Farmers
	Around 100 million €	85% State 15% Farmers

GOVERNANCE BODIES OF THE VACCINATION ACTION PLAN



Based on two bodies:

- **Strategic:** the Steering Committee (COFIL), including representatives of :
 - Poultry sector (producers associations)
 - Veterinarians
 - Scientific bodies
 - Vaccines producers
 - Regional services (local administrative unit)
- **Operational:** an internal committee, including representatives of the divisions (animal health, international, budget, ...) of the Directorate general for food

The progress of the plan is regularly presented to the farmers' organizations.

Role: Monitoring the campaign, evaluating its effectiveness, identifying solutions in case of difficulties

Leader: Ministry of agriculture (General Directorate for Food/DGAL)

Participants: Agricultural professionals, veterinarians, ANSES (risk assessment), ENVIT (veterinary school), SIMV (vaccines producers)

Consisting of:

Regional Campaign Monitoring Cells

- Leader: DRAAF
- Participants: Agricultural professionals, veterinarians
- Role: Anticipate labor and logistics issues

Data Valuation and Analysis Cell

- Leader: DGAL
- Tool Evaluation: Movement database managers, Calypso, Cartogip, SIGAL
- Scientific Evaluation: ANSES, ENVIT

Sanitary Diplomacy Cell

- Leader: DGAL
- Participants: Interprofessional organizations

Cost Observatory

- Leader: Interprofessional organizations

WORKING GROUPS

Several working groups were created during and after the start of the vaccination in order to better prepare and organize the campaign:

- Third countries communication working group
- Post-vaccination surveillance working group
- Tractability working group
- Vaccination of breeding ducks working group
- Vaccination at the hatchery working group

DATA RECORDING SYSTEM



CALYPSO

- To collect data on vaccination carried out by the **VETERINARIAN** or under his supervision: **vaccination and monthly visit for active surveillance.**



SIGAL

- To collect surveillance data: **LABORATORY analysis results**



CARTOGIP

- To combine the movement data declared by the operator and the vaccination data from Calypso and thus ensure the **TRACEABILITY OF THE VACCINATED ANIMALS.**

Marc Fesneau, former French minister of agriculture

1st October 2023 = official launch of vaccination

05

COMMUNICATION
GOVERNANCE

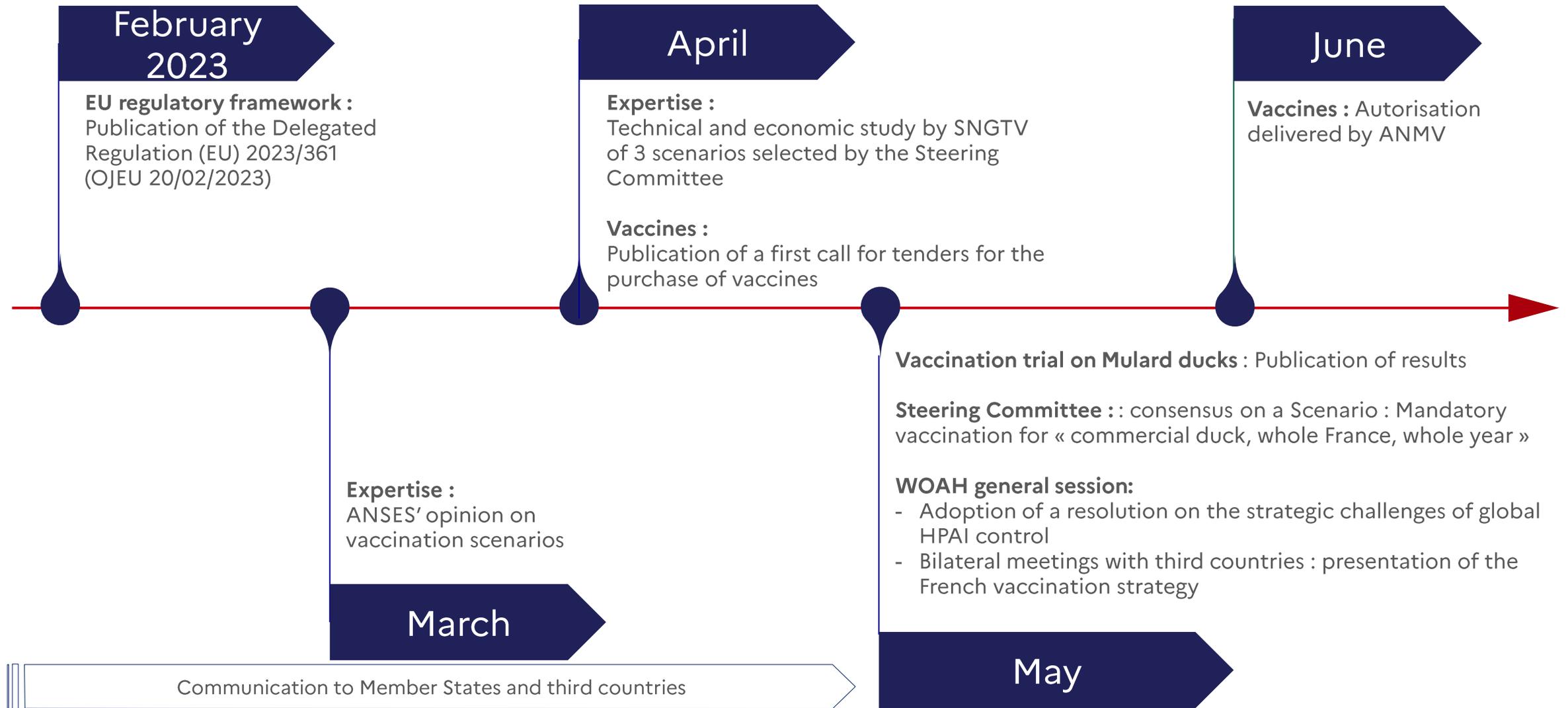


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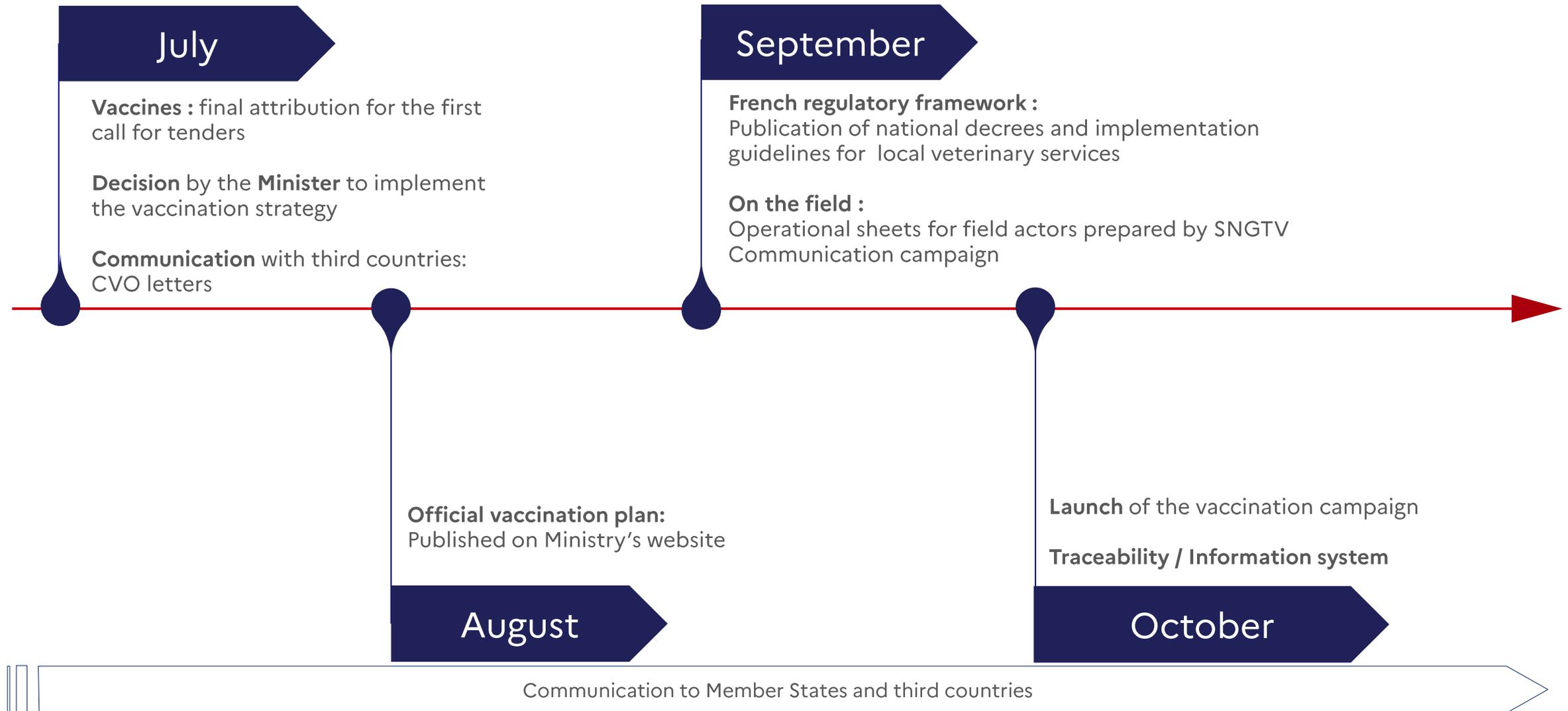
EXPERIENCE IN DETAIL :

KEY MILESTONES IN THE IMPLEMENTATION OF THE 1ST VACCINATION CAMPAIGN 2023-2024

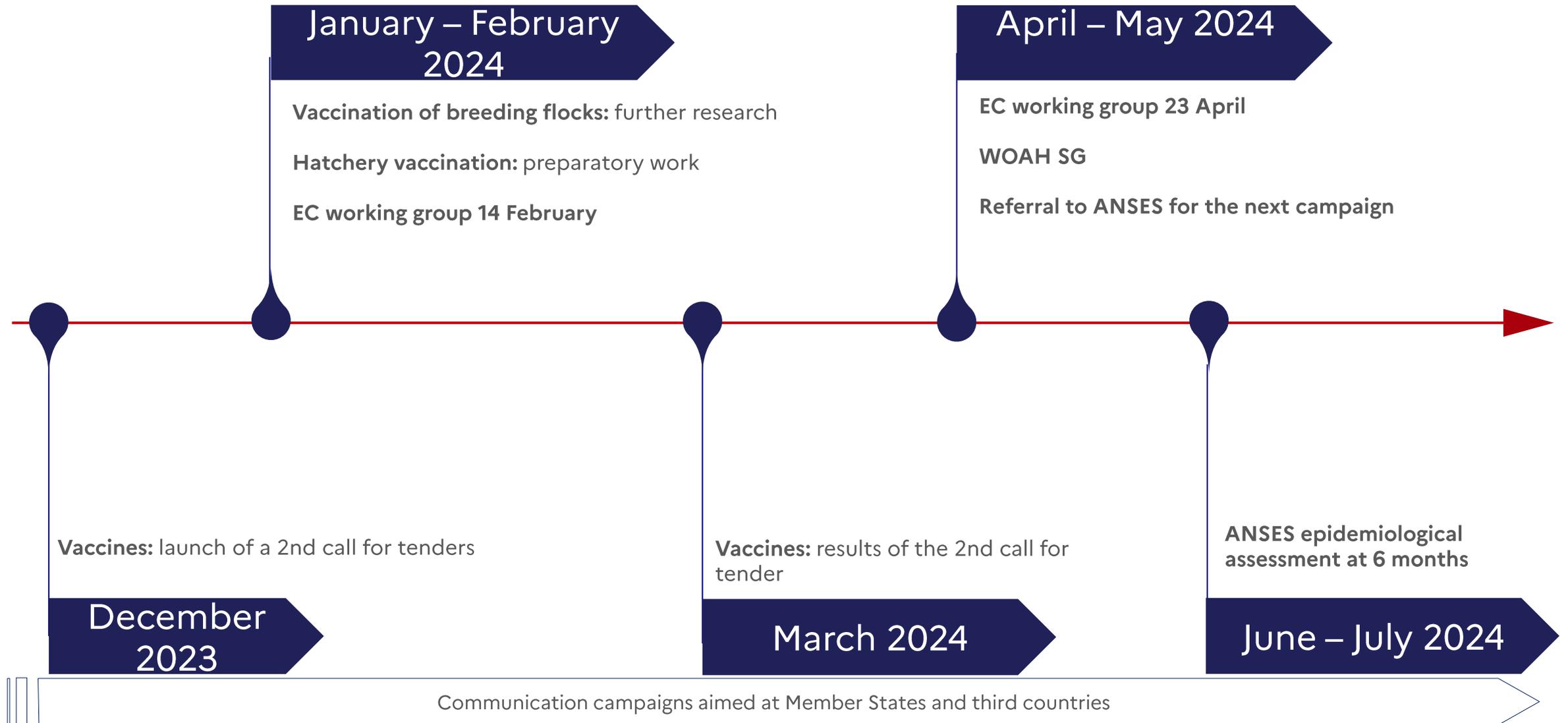
2023 Semester 1 : TOWARDS A VACCINATION STRATEGY



2023 Semester 2 : TOWARDS THE VACCINATION CAMPAIGN



2024 Semester 1 : COURSE OF THE 1st VACCINATION CAMPAIGN



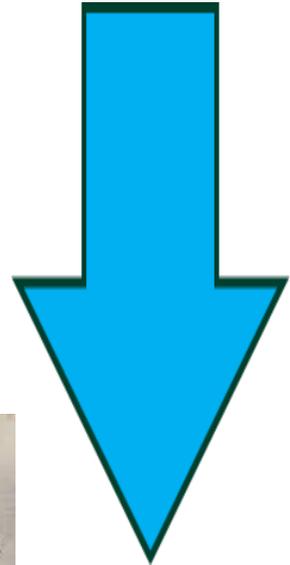
3. HPAI SEASON 2023/2024

NUMBER OF OUTBREAKS
AND EFFECT OF DUCK VACCINATION

A SUCCESSFUL 1ST CAMPAIGN

1st vaccination campaign started 1st October 2023

“From storms to a quieter sea”



81	488	0	492	1377	402	10
August 2015/ July 2016	2016/ 2017	2017/2020 3 seasons	2020/2021	2021/2022	2022/2023	2023/ 2024 included 2 vaccinated ducks farms

and if we had not vaccinated ?

Article : *Promising effects of duck vaccination against highly pathogenic avian influenza, France*

Preprint : 28 August 2024

*“France recently adopted a preventive vaccination strategy, vaccinating domestic ducks with inactivated and mRNA vaccines. This study evaluates the impact of this campaign on reducing HPAI H5 outbreaks. Using predictive modelling based on previous outbreak data, **the expected number of outbreaks in 2023-2024 without vaccination was significantly higher than the observed cases, indicating a 95.9% reduction attributable to vaccination.** These findings suggest that vaccination effectively mitigated the HPAI H5 outbreak in France.*

The expected number of outbreaks in France in 2023-2024 was estimated at 487 (95% prediction interval (PI): 273 – 701), significantly higher than the observed number (n=10)”

Reference : <https://www.biorxiv.org/content/10.1101/2024.08.28.609837v1.full.pdf>



**MINISTÈRE
DE L'AGRICULTURE
ET DE LA SOUVERAINETÉ
ALIMENTAIRE**

*Liberté
Égalité
Fraternité*

4. CONCLUSION AND OPPORTUNITY :

- **COLLECTIVE SUCCESS OF THE 1ST CAMPAIGN**
- **2ND VACCINATION CAMPAIGN = CONTINUATION OF THE 1ST CAMPAIGN**

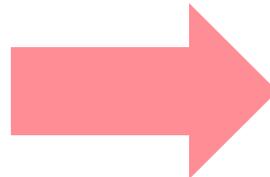
4. CONCLUSION AND OPPORTUNITY

- COLLECTIVE SUCCESS OF THE 1ST CAMPAIGN
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At a glance : HPAI outbreaks in France

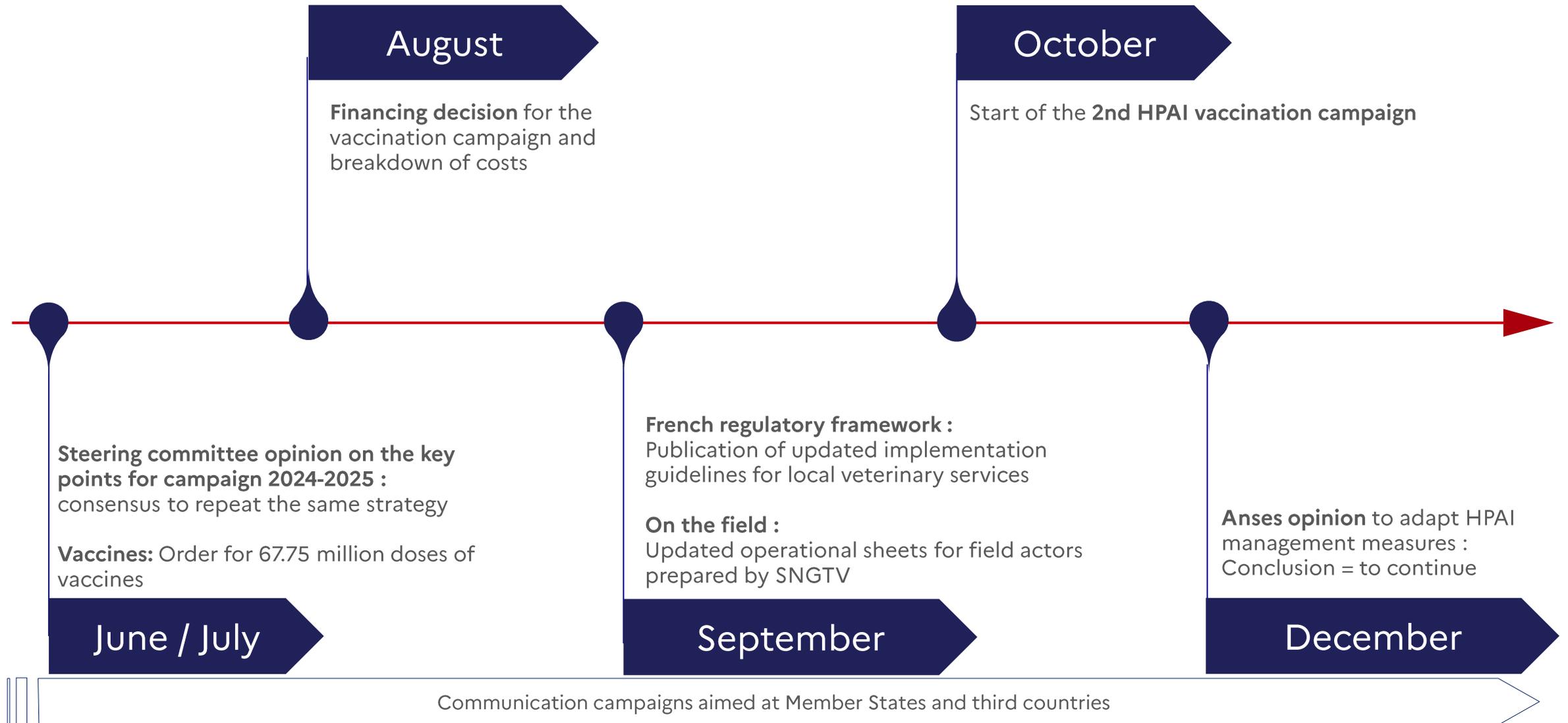
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- Zoonotic risk
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Early 2021 = we need to vaccinate !
 October 2023 = 1st vaccination campaign
 Season 2023/2024 = only 10 outbreaks
 Season 2024/2025 (24/02/2025) = only 19 outbreaks, free-status on December, free status on February

Actions in 2024 : preparation of the 2nd campaign

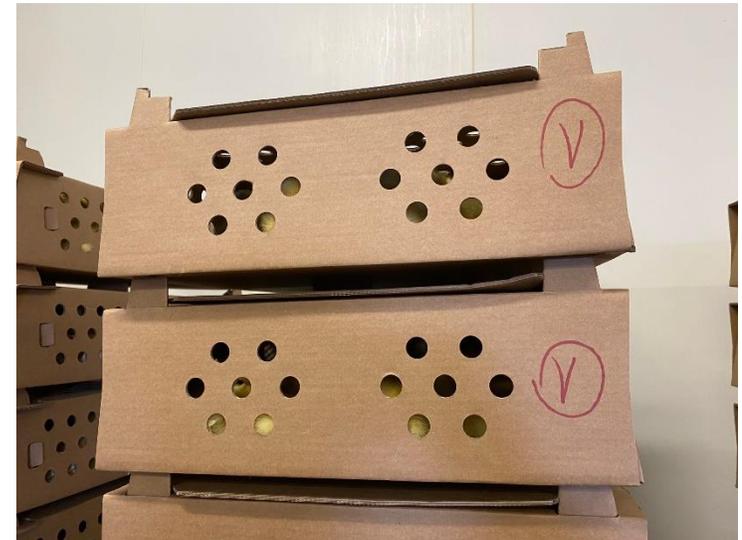


Few pictures of the vaccination campaign





Day-old ducks Vaccination at the hatchery

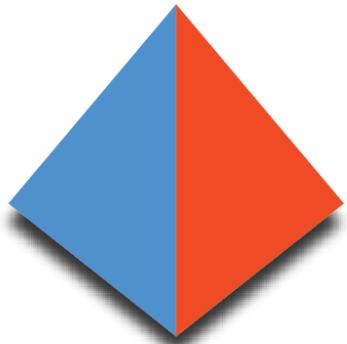


French Ministry of Agriculture website

Everything about the HPAI vaccination action plan in France
(updated and available in English)

<https://agriculture.gouv.fr/tout-ce-quil-faut-savoir-sur-le-plan-daction-vaccination-iahp-en-france>





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