

OFFLU GLOBAL ACTIVITIES

Dr Gounalan Pavade
OFFLU SECRETARIAT



**Food and Agriculture
Organization of the
United Nations**



**World Organisation
for Animal Health**
Founded as OIE



What is OFFLU?

• OFFLU is a network of expertise on animal influenza established jointly in 2005 by the World Organisation for Animal Health (WOAH) and the Food and Agriculture Organization of the United Nations (FAO) to support and coordinate global efforts to prevent, detect and control important influenzas in animals.

OFFLU's work covers several themes:

- Avian influenza
- Equine Influenza
- Swine influenza
- Wildlife
- Human animal Interface
- Protocols and Guidance
- Trainings



Who are OFFLU?

OFFLU is a global open network with diverse technical experts and robust mechanisms for the exchange of information between human and animal health sectors.

OFFLU Steering Committee



Ian Brown (UK)
(Chairman)



David Swayne (USA)
(Member)



Les Sims (Australia)
(Member)



Jiming Chen (China)
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OFFLU Scientist

Amelia Coggon (FAO)

OFFLU-WHO focal point officer

Magdi Samaan (WHO)

OFFLU Secretariat

Gounalan Pavade (WOAH)
Roberta Morales (WOAH)

OFFLU Executive Committee

Frank Wong (ACDP, Australia) – Chairman

Timm Harder (FLI, Germany)

Mia Torchetti (NVSL, USA)

Yanbing Li (HVRI, China)

Gregorio Torres (WOAH)

Artem Metlin (FAO)

WOAH/FAO Reference Laboratories,
national laboratories and other
expert contributors

OFFLU Network Objectives

- To share and offer technical advice, training and veterinary expertise to international organisations and Member Countries to assist in the prevention, diagnosis, surveillance, and control of animal influenza.
- To exchange scientific data and biological materials (including virus strains) within the network, analyse such data, and share information with the wider scientific community.
- To collaborate with the WHO on issues relating to the animal-human interface, including pandemic preparedness for early preparation of human vaccines.
- To highlight influenza surveillance and research needs, promote their development and coordination.



OFFLU call to update current AI situation (5 December 2022)

- More than 50 experts from all regions participated.
- Updates from Japan, India, Rep. of Korea, China, Australia, Russia, Canada, USA, RESUDIA network (Brazil, Colombia, Peru, Ecuador, Venezuela), Nigeria, Egypt, South Africa, Botswana, Europe including France, Germany, UK
- https://www.offlu.org/wp-content/uploads/2022/12/OFFLU-AI-situation_final_Dec2022.pdf
- Epidemiological, molecular analysis and research findings shared

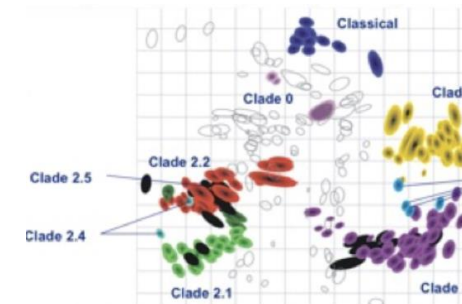
OFFLU contribution to WHO's bi-annual Vaccine Composition Meeting

- Seasonal influenza vaccines are updated; zoonotic influenza
- northern hemisphere in February
- southern hemisphere in September
- Organized by the WHO global influenza surveillance and response system (GISRS)
- Candidate Vaccine Viruses are also developed for Pandemic preparedness
- CVVs are viruses which are prepared for the potential use in vaccine manufacturing they are a recommendation
- OFFLU's attendance since 2011
- Other Participants: WHO Collaborating Centres, WHO Essential Regulatory Laboratories, National Influenza Centres, WHO H5 reference laboratories

OFFLU VCM reports



Evaluation of genetic changes of significance compared to candidate vaccine viruses (CVV) for pandemic preparedness



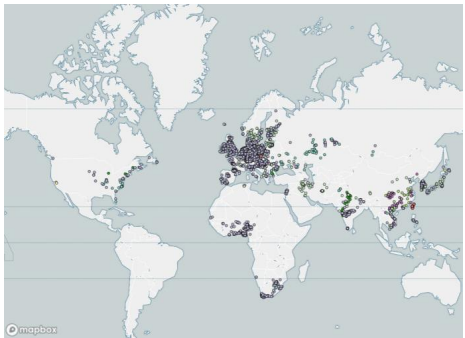
Antigenic properties of viruses quantitatively assessed using harmonized protocols in OFFLU contributing laboratories



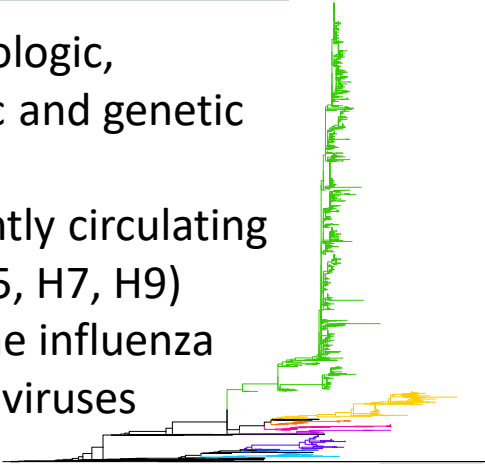
World Health Organization



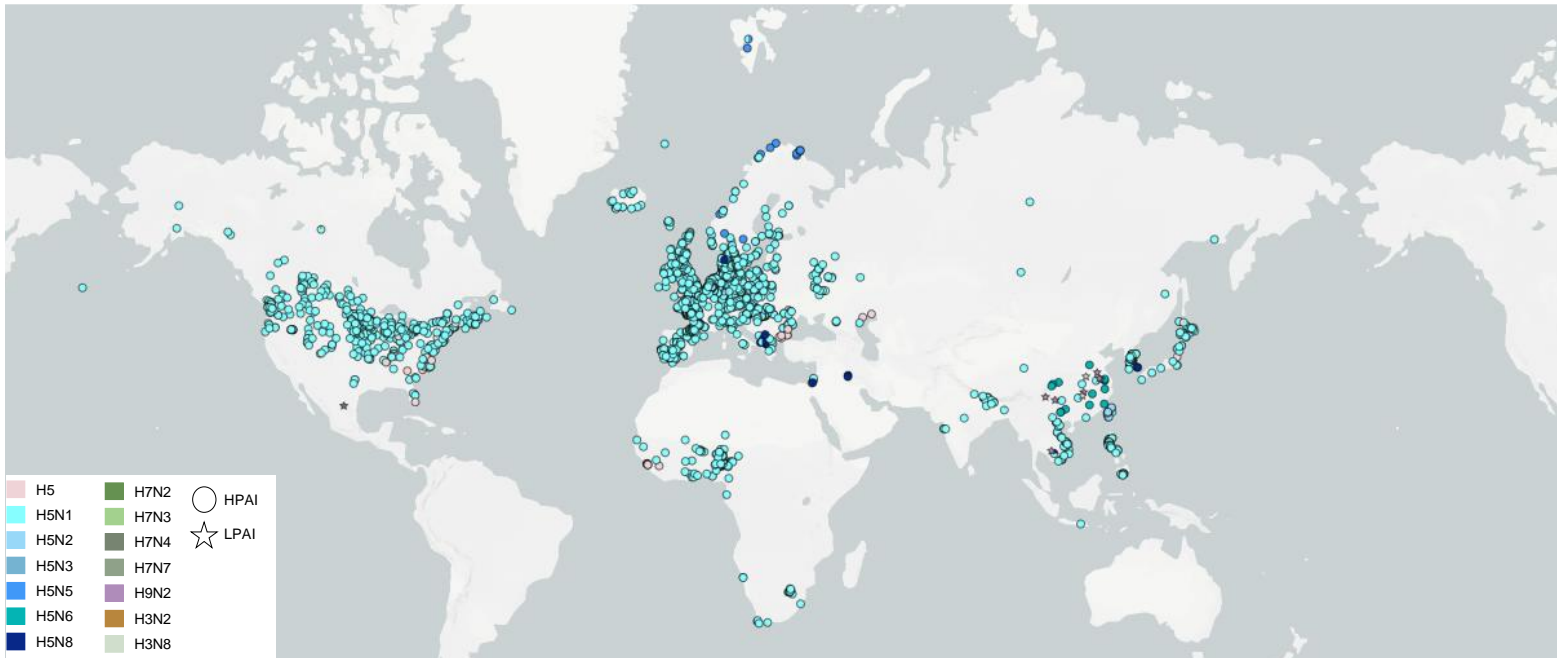
- OFFLU datapackage presented
- Discussed in the context of zoonotic human influenza cases
- WHO VCM zoonotic report
- Updates to CVVs



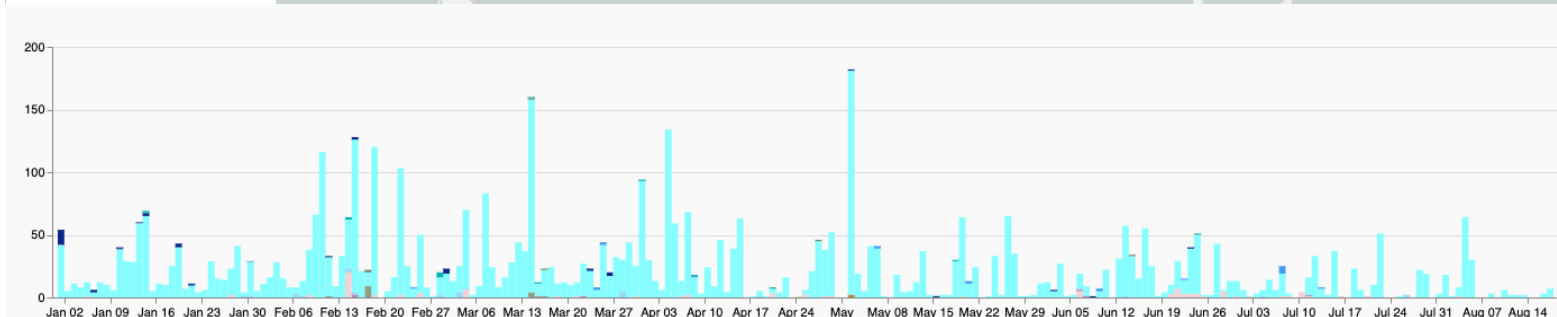
Epidemiologic, antigenic and genetic analyses of currently circulating avian (H5, H7, H9) and swine influenza (H1, H3) viruses



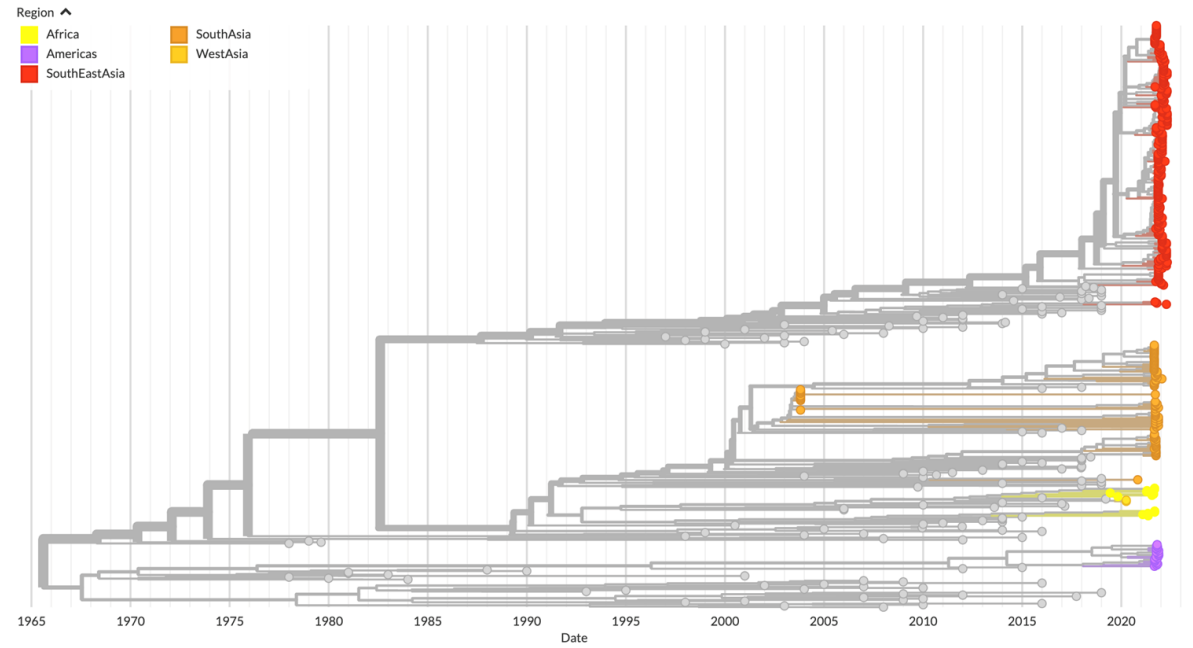
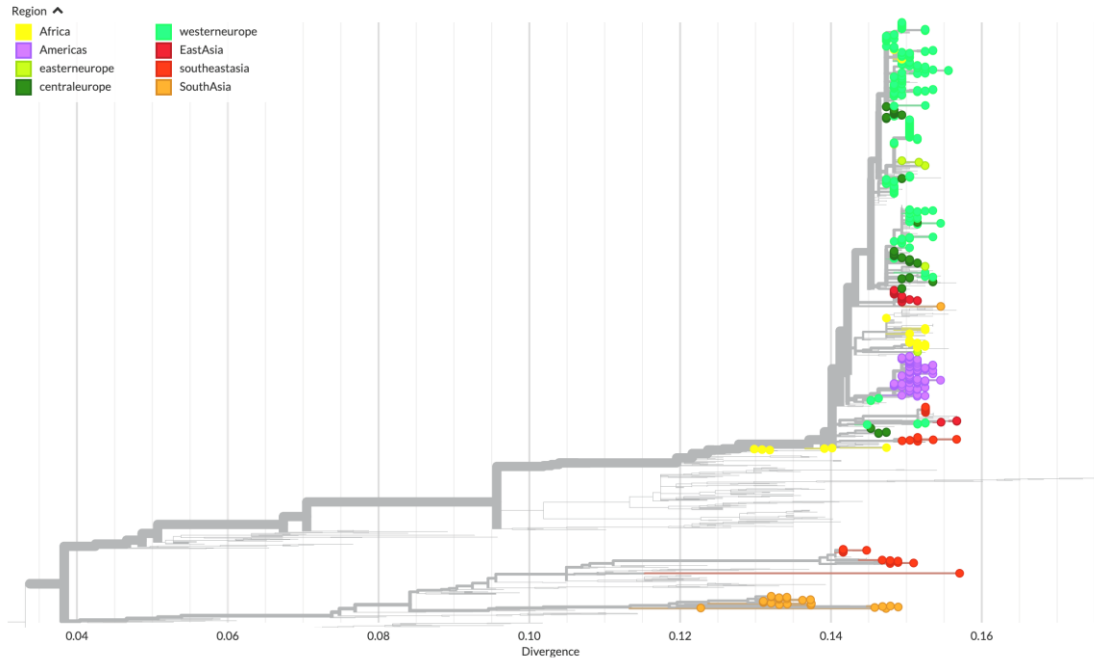
Avian VCM report September 2022



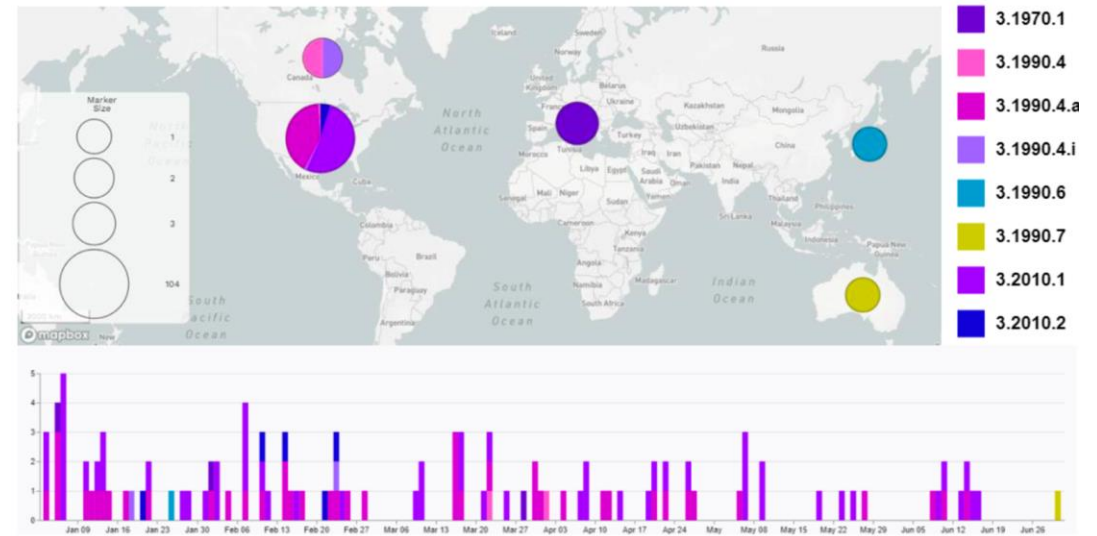
- Global spread of H5Nx viruses
- Outbreaks in poultry
- Detections in wild bird



Avian H5 and H9 viruses



Swine VCM Report September 2022 – H1 and H3 viruses



Highlights – Data sharing

- Sequence sharing:
588 HPAI H5, 60 LPAI H7 and 89 LPAI H9 avian sequences 345 H1 and 116 H3 swine sequences
- Antigenic Characterisation- Avian :
23, H5 2.3.4.4b
four, H5 2.3.2.1a
two H9 G2

<https://www.offlu.org/wp-content/uploads/2022/09/Avian-OFFLU-September2022-Final.pdf>

- Antigenic Characterisation- Swine:
10, H1A
4, H1B
7, H1C
4 H3

<https://www.offlu.org/wp-content/uploads/2022/09/OFFLU-vcm-swine-2022c-final.pdf>

OFFLU experts contribute to IABS conference on AI vaccination strategies

- Organised by IABS – International Alliance for Biological Standardization
- WOAH HQ, Paris 25 – 26 October 2022
- Wide variety of government and private stakeholders including OFFLU
- Why use vaccines as additional measures
- Trade issues as a barrier to vaccination
- Vaccination and public health
- Vaccine availability and vaccination
- Major conclusions and Recommendations from the conference
- <https://www.iabs.org/documents/2022-meetings-and-webinars/hpai-high-pathogenicity-avian-influenza/final-conclusions-and-recommendations-hpai/?layout=default>

OFFLU AIM- Avian Influenza Matching

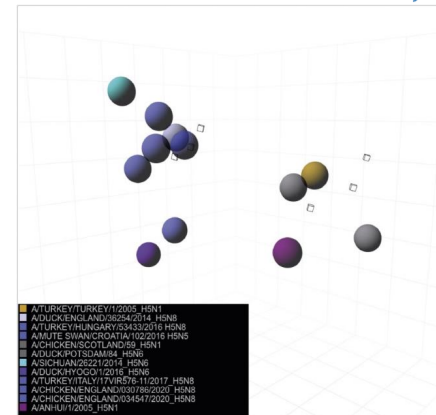


Antigenic Match

RESEARCH ARTICLE

Protective efficacy of an H5/H7 trivalent inactivated vaccine (H5-Re13, H5-Re14, and H7-Re4 strains) in chickens, ducks, and geese against newly detected H5N1, H5N6, H5N8, and H7N9 viruses

Xian-ying ZENG *✉, Xin-wen HE *, Fei MENG, Qi MA, Yan WANG, Hong-mei BAO, Yan-jing LIU, Guo-hua DENG, Jian-zhong SHI, Yan-bing LI, Guo-bin TIAN ②✉, Hua-lan CHEN ②✉



View more

IVM Online News About IVM Sign in

What is IVM Online?

A web-based animal health laboratory network system in Indonesia that manages antigenic and genetic data of the circulating HPAI viruses in Indonesia.

[Learn more](#)

Surveillance at the molecular level: Developing an integrated network for detecting variation in avian influenza viruses in Indonesia ☆

Nining Hartaningtish¹, Hendra Wibawa², Pudjatmoko³, Fadjat Sumping Tjatur Rasa⁴, Sri Handayani Inaningtish⁵, Rama Dharmawan⁶, Muhammad Azhar⁶, Ely Sawitri Siregar^{6,1}, James McGrane⁷, Frank Wong⁸, Paul Selleck⁹, John Allen⁹, Ivano Broz⁹, Mia Kim Torchetti^{1,2}, Gwenaelle Dauphin¹, Filip Claes¹, Winyadi Sastraningrat⁶, Peter A. Dur⁹ *✉

Abstract

Since 2006, Indonesia has used vaccination as the principal means of control of H5N1-HPAI. During this time, the virus has undergone gradual antigenic drift, which has necessitated changes in seed strains for vaccine production and associated modifications to diagnostic antigens. In order to improve the system of monitoring such viral evolution, the Government of Indonesia, with the assistance of FAO/OFFLU, has developed an innovative network whereby H5N1 isolates are antigenically and genetically characterised. This molecular surveillance network ("Influenza Virus Monitoring" or "IVM") is based on the regional network of veterinary diagnostic laboratories, and is supported by a web-based data management system ("IVM Online"). The example of the Indonesian IVM network has relevance for other countries seeking to establish laboratory networks for the molecular surveillance of avian influenza and other pathogens.



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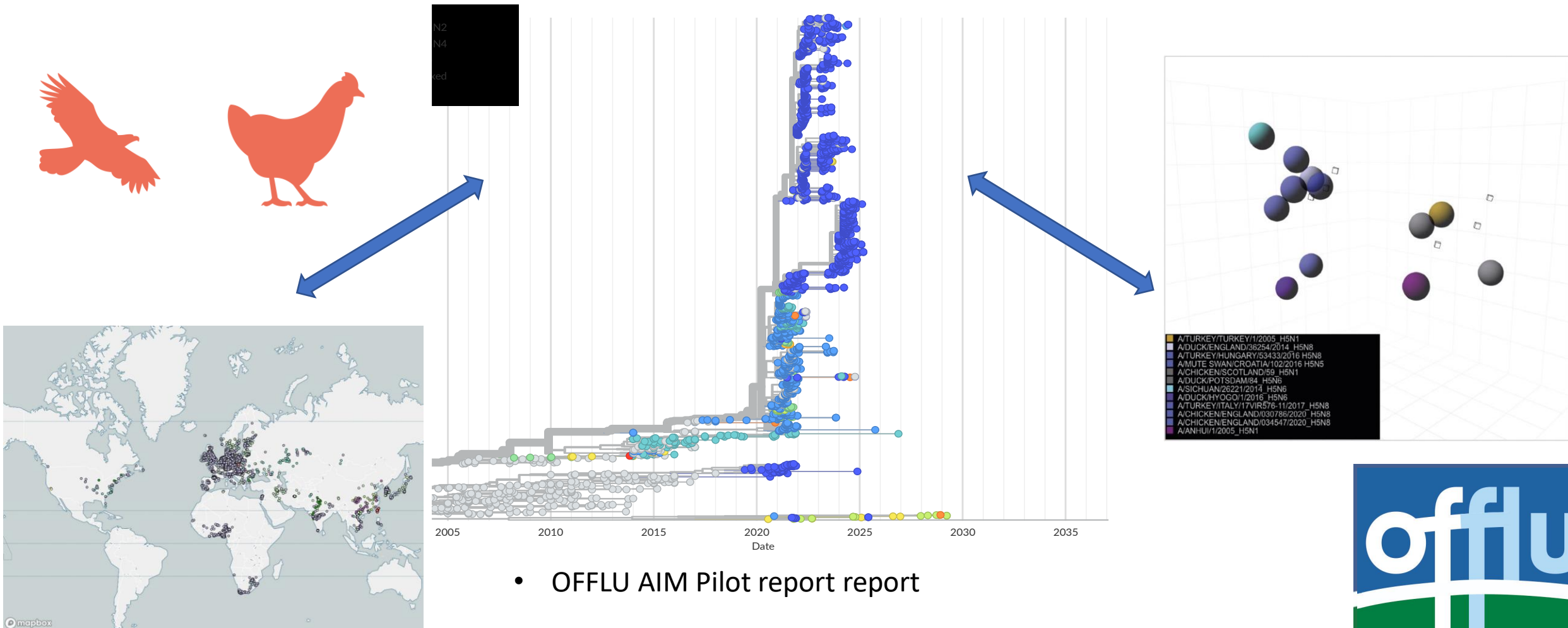


World Health Organization



OFFLU: Avian Influenza Matching (AIM)

An assessment of virus evolution and resulting antigenic diversity



- OFFLU AIM Pilot report report

Next steps – H5

- Clade 2.3.2.1a
- Clade 2.3.2.1c
- Clade 2.3.4.4h
- Eventually H9 and H7
- Fullsome report regularly updated

OIE Expert Surveillance Panel on Equine Influenza Vaccine Composition

Videoconference, 16 April 2020

KEYWORDS

#equine influenza, #OIE expert surveillance panel on equine influenza vaccine composition, #OIE Reference Laboratory, #recommendation, #vaccine.



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eofmd
european commission for the
control of foot-and-mouth disease



GF-TAD Avian influenza task force

- Established in June 2022, with main task to update/redraft of the Global FAO/WOAH AI Strategy. OFFLU will be consulted.
- The work plan includes:
 1. Discuss and decide way forward to review, assess and update the old strategy; agree on target audience and scope.
 2. Ask countries and experts what components such strategy should entail.
 3. Conduct needs assessment with target audience for the **updating** of the global strategy.
 4. Write detailed concept note on the proposed plan and methodology to update the GF-TADs Global AI Strategy, including resources **needed** and M&E .
 5. Draft the updated Strategy
 6. Strategy endorsement by Members



GF-TADs

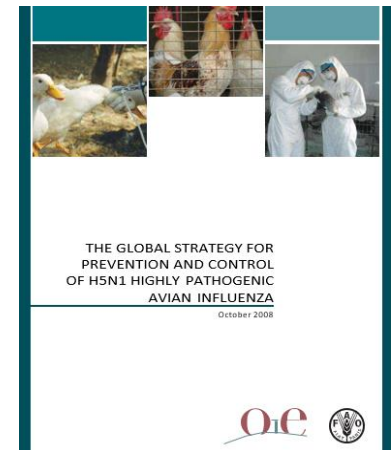
GLOBAL FRAMEWORK FOR THE
PROGRESSIVE CONTROL OF
TRANSBOUNDARY ANIMAL DISEASES



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Conclusion OFFLU global activities 2022

- Collection and contribution of zoonotic AI and SI data for contribution to WHO VCM Feb and Sept 2022 (pandemic preparedness)
- Guidance on Influenza A cleavage site document updated <https://www.offlu.org/wp-content/uploads/2022/01/Influenza-A-Cleavage-Sites-Final-04-01-2022.pdf>
- OFFLU proficiency testing 2022 – led by ACDP, Australia involving all AI Reference Centres
- OFFLU avian, wild bird, swine, equine expert groups share data and provide technical advice
- OFFLU AIM (avian influenza vaccine matching) project initiated
- Technical support to GFTAD AI global strategy revision

We thank you for your attention

OFFLU would like to thank colleagues and contributors for continued support to OFFLU

The OFFLU website has regular updates on OFFLU and parent organisations' publications, technical advice, protocols and many other useful links. Please visit: www.offlu.org for more information

For any questions please contact: secretariat@offlu.org



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