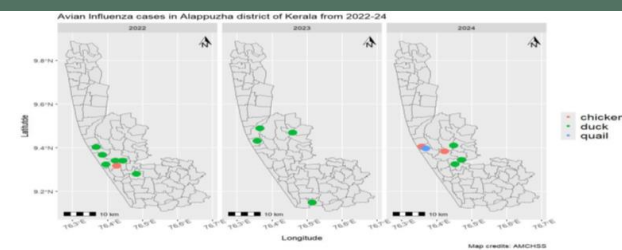


Environmental surveillance for Avian Influenza

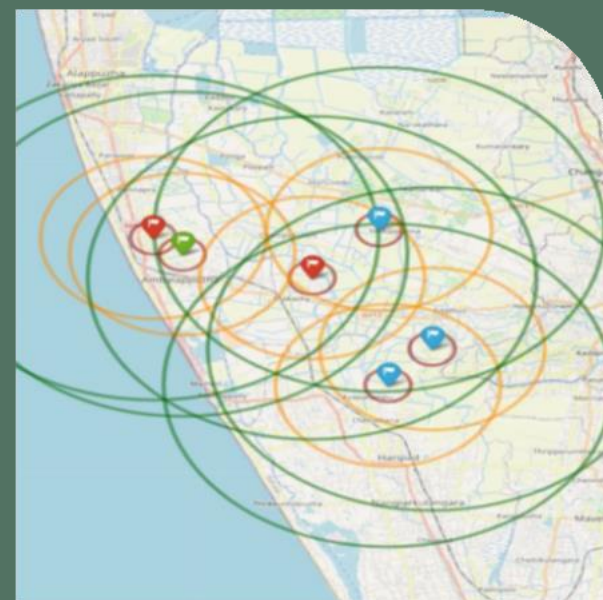


KERALA OUTBREAKS

In May 2024, Alappuzha district of the south Indian state of Kerala witnessed Avian influenza outbreaks in poultry farms (A, 2024). Among the nine farms from where samples were tested, 6 were found to be positive in 2024. The geo-visualization of farms where outbreaks were detected from 2022 to 2024



AIV OUTBREAK EPICENTER IN 2024



To mitigate the spread of Avian Influenza Virus outbreaks in Kerala, ICMR launched a study for establishing a comprehensive surveillance and monitoring of environmental ecosystems from surface water and wastewater.

The study aims to conduct environmental surveillance of surface water and wastewater from water bodies in proximity to affected and identified farms that reported outbreaks in 2024. The long-term objective is to assess the feasibility, bottlenecks, facilitators and barriers in implementing an early warning system for AIV.

Facts: According to the Global Animal Disease Information System, India has witnessed over 300 outbreaks of be HPAI of the H5N1 serotype among animals since the first outbreak in 2006 (<https://empres-i.apps.fao.org/diseases>). There is a risk of human spillover of AIV through direct contact with infected poultry and its products or indirectly via environmental sources such as contaminated water (Kandun I. Nyoman et al., 2006; Peiris et al., 2007).

Environnemental surveillance for Avian Influenza

OBJECTIVES

- To determine presence of AIV in surface water and wastewater samples taken from areas in 1 km, 5 km and 10 km distance zones from epicentres of outbreaks.
- To evaluate the feasibility and scope of environmental surveillance as a tool for prediction of AIV outbreaks.



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AN INTEGRATED,
UNIFYING APPROACH
AIMS TO SUSTAINABLY
BALANCE AND
OPTIMIZE THE HEALTH
OF PEOPLE, ANIMALS
AND ECOSYSTEMS



EXPECTED OUTCOME

With the current study we expect to generate evidence that showcases the utility and feasibility of environmental surveillance as a tool for detection of AIV. Establishing an Warning System (EWS) can help foresee future outbreaks, inform containment strategies and thus prevent the disease transmission.

