

# GRIPAVI

<http://gripavi.cirad.fr/>

A research project on the ecology and epidemiology of avian influenza and Newcastle disease in southern countries

## The project

The GRIPAVI project conducts ecological, epidemiological, virological and socio-economic studies to improve our understanding of the mechanisms and determinants of avian influenza outbreaks in wild birds and poultry. It aims to improve prevention and management of health crises.

Two worldwide viral diseases are specifically targeted: avian influenza and Newcastle disease, the later being particularly frequent in Africa. In their highly pathogenic forms, both diseases show similar clinical signs, are highly contagious and cause heavy mortality in poultry populations.

## Objectives

- To better understand the introduction, circulation and maintenance dynamics of avian influenza and Newcastle disease viruses in wild and domestic bird populations in southern countries
- To contribute to risk assessment and optimization of monitoring and control tools
- To train and inform stakeholders and decision makers



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## Some key outputs

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- 45,000 birds including 10,000 wild birds caught and tested.
- 11 PhD theses, including six by students from southern countries.
- 30 Masters-level internships in the six partner countries.
- 15 field or laboratory training sessions.
- 30 scientific publications and another 20 currently submitted.
- 60 symposium papers.
- 6 national reporting

## Six complementary study sites

- **The Red River delta in Vietnam:** intensive breeding systems and multi-species farms, endemic highly pathogenic avian influenza (HPAI H5N1), an active monitoring strategy and control by vaccination.
- **Banc d'Arguin National Park in Mauritania:** a coastal ecosystem hosting one of the world's largest concentrations of wintering shorebirds.
- **The Niger River delta in Mali:** on the major wetland area in Africa where both Afro-tropical and European migratory waterbirds gathered and a burgeoning poultry breeding sector throughout the country.
- **The Rift Valley in Ethiopia:** an important smallholder farming system and traditional marketing chains.
- **The Lake Alaotra region in Madagascar:** between rice fields and a protected area, a network of temporary and permanent wetlands where wild and domestic bird populations coexist.
- **Lakes Chivero and Manyame in Zimbabwe:** frequent interactions between poultry and periodic concentrations of wild migratory waterbirds from Africa and Europe.

## Partners

- A partnership between CIRAD and national institutions from seven countries, with the support of two French institutions, INRA and ANSES:

ARC-OVI: Agricultural Research Council – Onderstepoort Veterinary Institute, South Africa

NIVR: National Institute of Veterinary Research – Vietnam

DVS: Department of Veterinary Services of Zimbabwe

DRZV-FOFIFA: Département de recherches Zootechniques et Vétérinaire – Madagascar

NAHDIC: National Animal Health Diagnostic and Investigation Center – Ethiopia

LCV: Laboratoire Central Vétérinaire – Mali

CNERV: Centre national d'élevage et de recherche vétérinaire – Mauritania

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