



The African Great Lakes Region

United against avian influenza



A photograph of a man wearing a cap, holding a white rooster. The rooster is in the foreground, and the man is in the background, slightly out of focus. The rooster has a prominent red comb and wattle. The man is wearing a dark blue shirt and a light-colored cap. The background is dark and blurry, suggesting an outdoor setting.

Definition

Avian influenza, otherwise known as bird flu, is a highly contagious viral disease that can affect several different poultry species farmed for food production (chicken, turkey, quail, guinea-fowl, etc.), as well as domestic and wild birds. When derived from highly pathogenic strains, avian influenza causes a severe form of the disease and high mortality rates (up to 100 percent in 48 hours in modern chicken and turkey farms). The H5N1 virus is highly pathogenic and can contaminate humans.

UNITED AGAINST AVIAN INFLUENZA

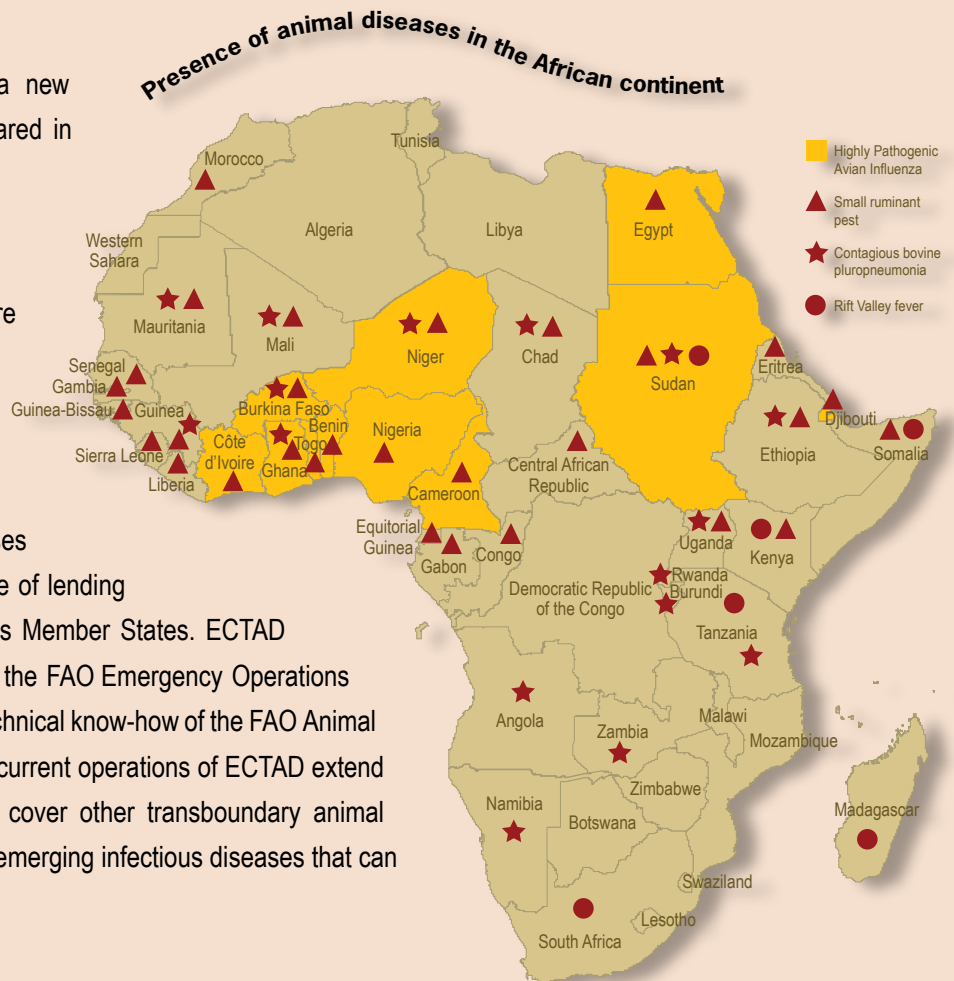
Risk area

Most experts agree that the AIDS and Ebola viruses first appeared in humans after having crossed the species barrier in the African Great Lakes region. Interaction among humans, animals and their environment is thus at the origin of new infectious disease epidemics – or even pandemics – with devastating human, social and economic consequences. Several zoonotic diseases – transmitted by humans to animals and vice versa – are endemic in the region. Moreover, the uncontrolled destruction of the ecosystem is favouring the appearance of new diseases.

Such is the context within which a new threat – avian influenza – has appeared in this region.

FAO and avian influenza

In 2004, the Food and Agriculture Organization of the United Nations (FAO) reacted to the avian influenza crisis by creating the Emergency Centre for Transboundary Animal Diseases Operations (ECTAD) with the purpose of lending immediate veterinary assistance to its Member States. ECTAD combines the operational capacity of the FAO Emergency Operations and Rehabilitation Division with the technical know-how of the FAO Animal Production and Health Division. The current operations of ECTAD extend well beyond avian influenza to also cover other transboundary animal diseases as well as emerging and re-emerging infectious diseases that can potentially impact human health.



A PROJECT TO PREVENT CRISIS

The African Great Lakes region

Considered a region of great potential, it has been marred by intense violence in the past fifteen years, with significant impacts on poverty. In line with the International Conference on the Great Lakes Region, whose purpose is to establish peace and sustainable security in the area, Burundi, the Democratic Republic of the Congo and Rwanda have acknowledged the need to standardize measures to favour the early detection of avian influenza and to intervene rapidly and effectively in preventing a crisis in the event of an outbreak.

Thanks to the financial support of the Government of the Kingdom of Belgium, FAO has developed and implemented a project aimed at mitigating the risks posed by avian influenza, while ensuring a better control of transboundary animal diseases in the region.

Epidemiological surveillance networks: vigilance and mobility

Epidemiological surveillance – or epidemio-surveillance – is the foundation of any attempt to control animal diseases. At the beginning of the project, a characterization of the surveillance network was undertaken, with the objective of identifying the main players, risk areas and priority requirements. It was confirmed that, in the three countries involved, surveillance had been seriously under-financed ever since the end of the PACE project (see box).



Officials from the veterinary services, technicians and volunteers were trained to perform epidemiological surveillance, identify the clinical symptoms of the main diseases, use rapid tests, take and process samples. Standard reports (monthly, six-monthly, immediate notification and follow-up) were drafted and circulated. Protection kits, sampling material and disinfectants were distributed to facilitate the intervention of field workers upon the outbreak of animal diseases. Surveillance teams have been equipped with vehicles allowing for rapid intervention. In the areas with greatest interaction between wild birds and domestic poultry, national park agents have been trained to perform avifauna surveillance and capture wild birds, and taught specialized sampling techniques.

The skills development was supplemented by intense communication activity with the population, political decision-makers and the media. Adequate surveillance relies on the daily observations of hundreds of thousands of breeders who must understand how and to whom they can trustingly report an abnormal situation. In the course of the project, 113 alerts were received and followed-up in the field, about half of which concerned diseases affecting poultry. None of the analyses confirmed the presence of avian influenza. Nonetheless, other diseases such as the Newcastle disease affect poultry in the region.



In parallel to the follow-up of alerts, statistically representative sampling plans were prepared to facilitate the collection of data on disease in poultry, pigs, small ruminants and cattle in the region. The approximately 9 000 samples drawn has made it possible to have a snapshot of the livestock health situation in the three countries, with the purpose of better understanding animal disease trends in the region.

PACE

The Pan African Programme for the Control of Epizootics (PACE) was a regional programme managed by the African Union with the technical support of FAO. Funded by the European Union, the objectives of PACE were to upgrade veterinary services in the 32 states in which it had been implemented, eradicate rinderpest and control transboundary animal diseases. At the end of the programme (2007), the countries in the region were declared rinderpest infection free, while important epidemio-surveillance networks and laboratories were established.

Laboratories to ensure secure and rapid diagnosis

To enable adequate intervention, epidemiological surveillance relies on rapid diagnosis performed by credible laboratories in the field.

Regional veterinary laboratories needed to be upgraded to provide accurate diagnosing capabilities of animal diseases (namely avian influenza). At the beginning of the project, some laboratories had to be brought up to standard before new advanced techniques, such as Polymerase Chain Reaction (PCR), could be introduced. The project supplied laboratory equipment and consumable goods: hoods, centrifuges, pipettes, water distillers, PH meters, water baths, freezers, PCR thermocyclers, etc. Several training courses were organised for laboratory technicians to strengthen their knowledge of traditional methods for diagnosing animal diseases. Advanced training, namely in molecular diagnosis, was also supplied in the Democratic Republic of the Congo and in Rwanda.



All the laboratories are now able to diagnose major animal diseases – African swine fever, Rift Valley fever, Highly Pathogenic Avian Influenza, Newcastle disease, contagious bovine pluropneumonia, pest of small ruminants – by means of conventional techniques. A virology unit has been set-up in Burundi, while a molecular biology unit has been created in Rwanda.

Response plans: reacting to epidemiological outbreaks

The three countries concerned have drafted emergency response plans to serious epidemiological outbreaks, which deal, among other things, with the mobilization of rapid response teams, the implementation of

isolation measures, techniques for slaughtering affected animals, compensation for breeders, crisis communication, care of possible human cases and support to affected producers.

Supported by FAO within the framework of the project, emergency response teams were established in the three countries. All three teams are operational and equipped with the necessary material (protection gear, material for sampling and autopsies, vehicles).

Standardized legislative and political frameworks

All three countries amended their veterinary legislation to fit the current animal diseases situation, upgrade it to the level of the best practices known, and facilitate regional cooperation within a more standardized framework. Thanks to the support of each country project team, remarkable progress was achieved in this field. In Rwanda, a new law on veterinary health has been adopted, while new bills are under approval in the other two countries.

Thanks to new coordination mechanisms, national policies for the management of possible avian influenza outbreaks have been standardized.

CAUTION REGARDING AVIAN INFLUENZA

Ongoing efforts

Thanks to the financial support of the Government of the Kingdom of Belgium, the project was concluded satisfactorily and its objectives were reached. National capacity in terms of prevention, preparedness and combating the avian influenza pandemic was consolidated in all three countries. Nevertheless, efforts must continue.

The costs of epidemio-surveillance networks and diagnosis laboratories – minimal compared to the losses caused by animal diseases – are considerable for the governments concerned. However, the risks deriving from existing, emerging and future animal diseases affecting the Great Lakes region extend well beyond Africa. Animal health is a global public good.

New partnerships are currently being developed in the Great Lakes region to combat transboundary animal diseases, namely among the Economic Community of the Great Lakes Countries. It is imperative to support governments in their efforts to pursue the surveillance and control of transboundary animal diseases and prevent the progressive dismantling of existing networks and installations out of a lack of resources.

FAO continues to be a fundamental player in the fight against zoonoses, both in this region and elsewhere in the world, thanks to the unfailing support offered to governments in preventing animal health disasters with dramatic consequences.



photo: ©FAO/I. Nsabiyumva

TADinfo

Thanks to this software – developed by FAO in 1997 and continuously perfected ever since – information on livestock and animal diseases can be recorded and analysed. TADinfo offers the remarkable advantage of a tailor-made system, with minimum maintenance and updating costs. Furthermore, countries that adopt TADinfo can either set-up their own animal disease database, or decide to adapt an existing one. TADinfo has been installed in the three countries, within the framework of the project, while laboratory staff and veterinary services have been trained to use the software.

For information

Emergency Centre for Transboundary Animal Diseases Operations (ECTAD)

- Animal Production and Health Division
- Emergency Operations and Rehabilitation Division

Food and Agriculture Organization
of the United Nations

Viale delle Terme di Caracalla
00153 Rome
Italy

Email: glews@fao.org

FAO Burundi: fao-bi@fao.org

FAO DRC: fao-cd@fao.org

FAO Rwanda: fao-rw@fao.org

Lubumbashi, Democratic Republic of the Congo

“Each year, we import hundreds of thousands of chicks from South Africa and Zimbabwe. Thanks to this project, we have been able to train ten screening agents who have been placed along the borders to perform health screenings on cargo” explains Dr Hubert Ngote, head of the Lubumbashi laboratory.

He accompanies his visitors to the room with the refrigerator containing rapid detection kits for the virus. Dr Ngote and his team use these kits to perform preliminary tests on chicken samples. If a sample is suspect, it is sent to the Kinshasa laboratory to be tested again and to confirm, or not, the presence and nature of the avian influenza virus.



photo: ©FAO/S. Sarkar