

A Collaborative Research  
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## Controlling Avian Flu and Protecting People's Livelihoods in the Mekong Region

### Overview of the Mekong Component of the DFID-funded Collaborative HPAI Research Project

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#### Key Issues

- Humanity now shares a global commons of disease risk.
- The risk of disease is a result of biological processes and economic behaviour of livestock keepers and traders.
- It is thus essential to enlist the poor livestock keepers in disease control programmes through proper economic incentives.



#### Background

The first highly pathogenic avian influenza (HPAI) H5N1 strain emerged in 1996 when it was identified in geese in Guangdong Province in southern China. It then caused disease in Hong Kong SAR where poultry and humans were affected in 1997, poultry only in 2001 and early 2002 and poultry and captive wild birds in 2002-03. From 2003 onwards the disease spread widely, initially through East and Southeast Asia in 2003-04 and then into Mongolia, southern Russia, the Middle East and to Europe, Africa and South Asia in 2005-06, with outbreaks recurring in various countries in 2007.

Since its emergence, H5N1 HPAI has attracted considerable public and media attention because the viruses involved have been shown to be capable of producing fatal disease in humans, which gives rise to the fear that the virus might acquire the capacity for sustained human-to-human transmission and thus cause a global influenza pandemic.

Driven by the fear of a possible human pandemic, responses to HPAI outbreaks have generally been top-down, heavy handed government interventions. Control measures have centred on stamping out which may entail large scale culling of infected flocks and in-contact flocks and the high concentration of poultry in certain areas has led to the culling of millions of animals at great expense. For low

income countries in which poultry is raised primarily by smallholders, who are often poor, such measures may constitute a serious burden, and thus lead to socially unjust outcomes and / or be undermined.

In order to improve local and global and capacity for making evidence-based decisions on the control of HPAI (and other diseases with epidemic potential), which inevitably have major social and economic impacts, the UK Department for International Development (DFID) has funded a multi-disciplinary and collaborative HPAI research project in Southeast Asia and Africa.

## Objectives

### 1. Deeper understanding of HPAI risk

The risk of disease in livestock populations is a result of biological processes and economic behaviour of livestock keepers and traders. Current control regimes promoted by policy makers respond primarily to biological disease characteristics, while private actors, who have a major role to play in disease control, respond primarily to economic incentives. To more effectively manage HPAI risks in areas, in which the disease has become established, and thereby to limit local economic damage and wider implications of disease propagation and supply chain disruption, a deeper understanding of the interactions between animal health promotion and the economics of livestock production and marketing is needed. The first objective of this project is to provide such insights from detailed and rigorous field research.

### 2. Emphasis on institutions and livelihoods

Disease outbreaks and control measures affect not only animal health but livelihoods. In developing countries, extensively raised backyard livestock are an essential source of both food security and livelihood support. This means that control measures will animate complex responses at the local level, responses that can undermine both programme effectiveness and economic wellbeing of the poor. To manage this risk in ways that are both biologically and socially effective thus requires detailed understanding of both disease epidemiology and institutions.

### 3. Substantive and innovative policy guidance

HPAI is not unprecedented, but early responses to this disease indicate that a new generation of policies are needed to address this animal and public health risk. Despite determined early eradication efforts, outbreaks continue on a now regular cycle and in some areas the disease appears to have become endemic. Evidence also suggests that conventional control measures have unanticipated unintended and at times unanticipated behavioural consequences that undermine their effectiveness and compound negative economic consequences, particularly with respect to sustainable smallholder livelihoods. With this in mind, the project will focus on substantive recommendations from direct evidence regarding poultry production, distribution, processing, and marketing systems. This

kind of integrated health and behavioural approach is a significant innovation that can support new policies to combat a larger universe of transboundary animal diseases (TADs) and at the same time address the needs of poor majorities in the subject countries. Both rural and urban poor populations need a secure and affordable food supply, and smallholder farmers need to be recognized as part of the solution to protecting a global commons of disease freedom.

## Context

### 1. Evidence-based standards for more effective policy dialogue, design and implementation

Because it represents a serious health threat originating in a ubiquitous food source, the advent of HPAI aroused dramatic public and private responses. Early responses were crisis oriented, relatively unfocused, and too rapid to permit detailed examination of disease aetiology, institutional context, or stakeholder consultation. Given the persistence of the HPAI health risk, it is necessary to deepen capacity at all levels for more effective policy dialogue and responses. With detailed and rigorous research on disease and microeconomic institutions, this project will strengthen the basis of evidence needed to support more inclusive policy dialogue and more socially effective approaches to HPAI risk management.

### 2. Project countries

This project is focused on what can be called the HPAI 'epicentre' countries, the Mekong group of countries in Southeast Asia, which include Cambodia, Lao PDR, Thailand and Viet Nam. These countries share common borders and together have enough commonalities to mount effective regional collaboration, with enough differentiation to yield a broad spectrum of policy insights. Of particular relevance is the diversity of stages of economic development these countries represent, with very subsistence-oriented livestock sectors in Lao PDR and Cambodia at one end and Thailand, the world's sixth largest poultry exporter, at the other. These Mekong countries have extensive smallholder poultry populations and have experienced repeated outbreaks with diverse public and private responses.

### 3. Team composition

There are two areas of emphasis in the project, animal health/epidemiology and economic assessment. For each area of emphasis and in each country, there are three team components. For program design and implementation, FAO staff members are supported by leading international experts and local counterparts representing public, academic, and private interests. Research plans will be localized with official approval and ongoing consultation. Each country activity is explicitly collaborative, aimed at developing capacity and joint workshops are envisaged to build awareness and disseminate results locally.

## Deliverables

### 1. Review of historical experience of HPAI and its control

The project is engaged in each country, reviewing the evidence on the spatial and temporal evolution of HPAI and public as well as private responses to them. From this historical analysis a series of deeper study designs are being developed to examine initial conditions, underlying institutions, and stakeholder behaviour. Most of the historical background research has been completed and country overview reports are in preparation. This historical evidence and its analysis will be documented in all project research products.

### 2. In-depth institutional and livelihoods analysis

It is clear from previous research that heterogeneity is very important to HPAI risk, private responses, and therefore to effective policy design. For this reason, the project is undertaking small but focused surveys to identify the main drivers of risk propagation and behaviour of producers, traders, processors, and vendors as these relate to HPAI risk and the economic fundamentals of smallholder livelihoods. These studies will be reflected in a series of research reports for public dissemination. Surveys have already been completed or are underway in the study countries, and several research reports have been published, while more are in preparation.

### 3. Pro-active and results-oriented policy guidance

The ultimate objective of this project is to influence policies and institutions in ways that will allow to identify, substantiate, and facilitate more socially just and effective HPAI risk reduction measures. Of particular relevance are policies that promote economic wellbeing among the poor, both rural smallholders and urban consumers. Using the data and research findings generated by the project, a series of research and policy briefs will be prepared for dissemination, targeting responsible agency decision makers and leading private stakeholder groups. In addition to published research and advisory products, the project will hold international expert symposia, local research and policy workshops, stakeholder consultations, and executive briefings for policy makers.