



# DFID-Funded Collaborative HPAI Research Project for Asia and Africa

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On behalf of the IFPRI/ILRI FAO/RVC/Berkeley team

Pro-Poor HPAI Risk Management Project  
Inception Workshop, Nigeria

Pro-Poor HPAI Risk Management Research Project

# Overview

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- Background & Motivation
- Project Goal & Objectives
- Research themes
- Oversight & Management
- Principles & Next Steps

# Motivation

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- Considerable uncertainty about the timing, extent, and severity of a potential animal disease outbreak, yet developing countries must make critical decisions about ways to defend against a potential outbreak of diseases, such as Highly Pathogenic Avian Influenza



# HPAI Threats

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- Poor peoples' livelihoods
  - disease itself
  - control measures
- Poultry industry
  - in affected countries
  - in non-affected countries
- Global public health
  - rural populations
  - urban populations



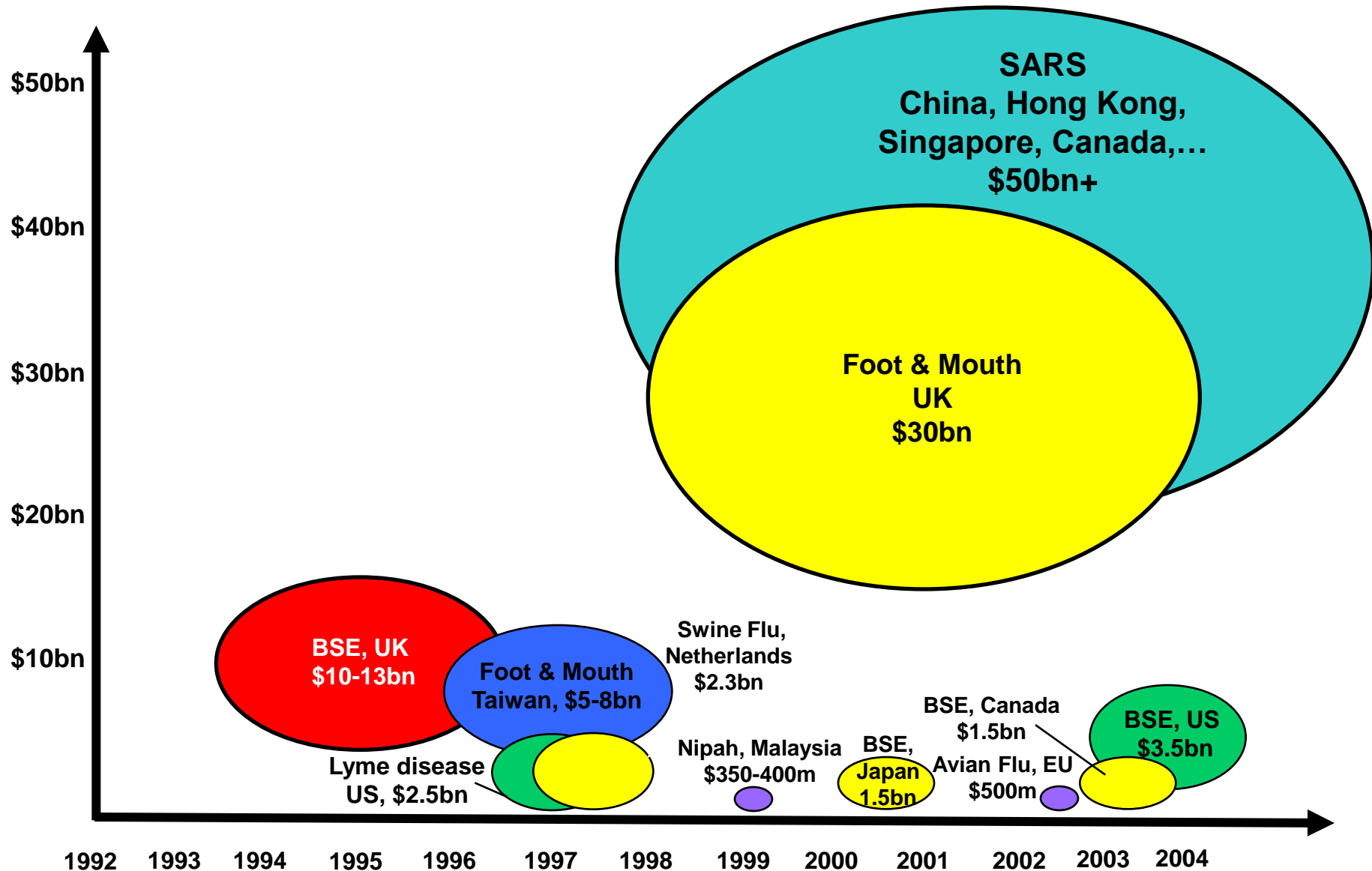
# Disease and control measures

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- There are likely to be differential economic impacts on different income groups and sectors of the economy
- The rural poor, whose livelihoods depend in large part from poultry and who consume their own poultry, may disproportionately feel these costs.



# Economic Impact of Selected Diseases



Adapted from: *Bio-Era*. Courtesy of Dr. Will Hueston, Center for Animal Health and Food Safety, UM

# HPAI Research & Research Gaps

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## Research

- Viral genomics – virus evolution
- Pathogenesis – in humans and poultry
- Immunology – vaccine development
- Disease ecology – wild bird & domestic reservoirs
- Disease epidemiology – e.g. spread mechanisms (some)

## Research Gaps

- ‘Stratum-specific’ impacts of disease and disease control
- Cost-effectiveness / cost-benefit of control (acute, endemic)
- Institutional angles of HPAI control
- Externalities / ‘global public goods’ aspects of HPAI control

# Project Goal

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**Safe smallholder poultry enterprises and poultry markets in regions affected or at risk of HPAI while also minimizing the potential spread of HPAI to humans**



# Project Objectives

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1. Provide scientific basis for
  - cost-effective, and
  - 'equitable'HPAI control strategies,
2. 'Inject' insights into
  - national,
  - regional and globalpolicy processes, **and**
3. Build capacity for evidence-based formulation of disease control policy



# Scope of Research

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- Select group of countries in Africa and Asia who are either infected or at risk of becoming infected will be the focus of the study, however...
- Methods developed by the proposed research will be general, and applicable to other potential disease threats and regions

# Regional / Country 'Responsibility'

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Ethiopia, Kenya,  
Nigeria, Ghana, and Indonesia,  
Project Lead- Clare Narrod



Royal Veterinary College  
University of London



The Mekong Region: Thailand,  
Cambodia, Vietnam (Lao PDR)  
Project Lead – Joachim Otte

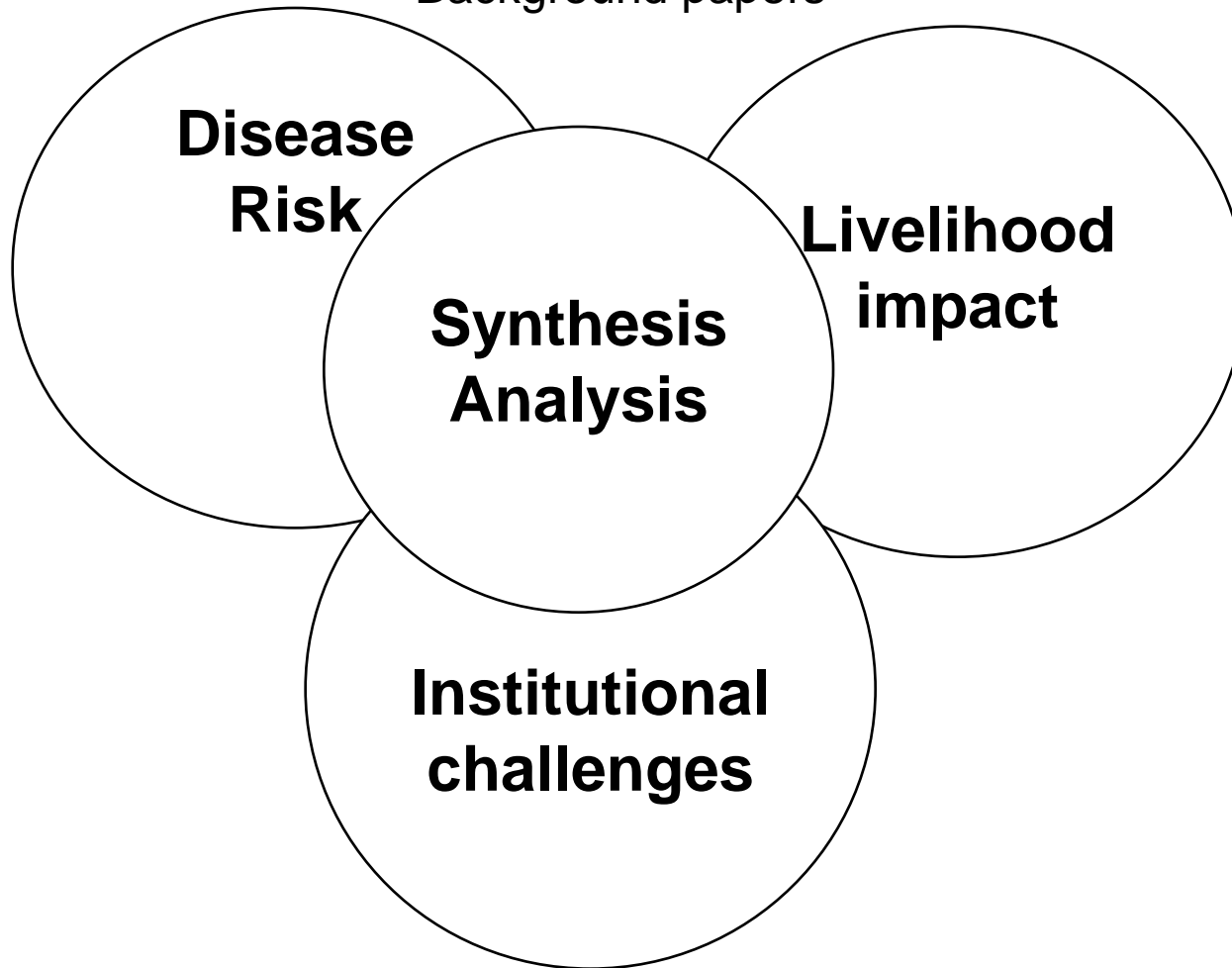
# Our Strategy

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- A 6 thematic approach will be used to capture the complex interactions of the spread of AI and its impact on the economy as a whole
  - Attention paid to: 1) smallholders and the poor, 2) to acute vs endemic situations, and 3) long vs short distance spread
- Self-contained, but interlinked themes
  - Linked by baseline values, assumptions and policy options

# Research Themes

Background papers



**Risk communication and decision support tools**

Pro-Poor HPAI Risk Management Research Project

# Background papers

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## Aim

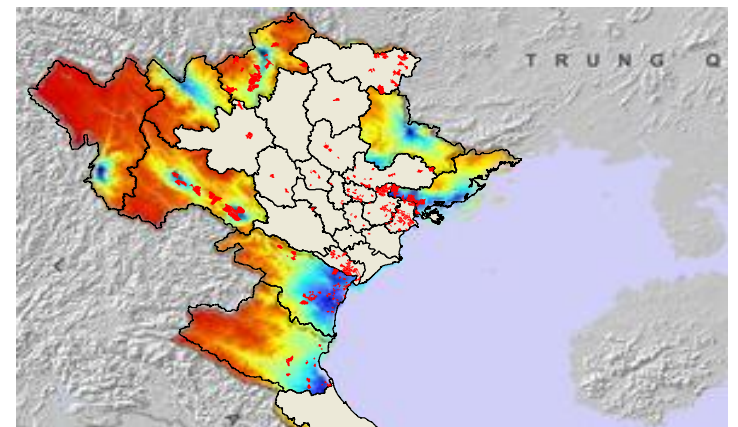
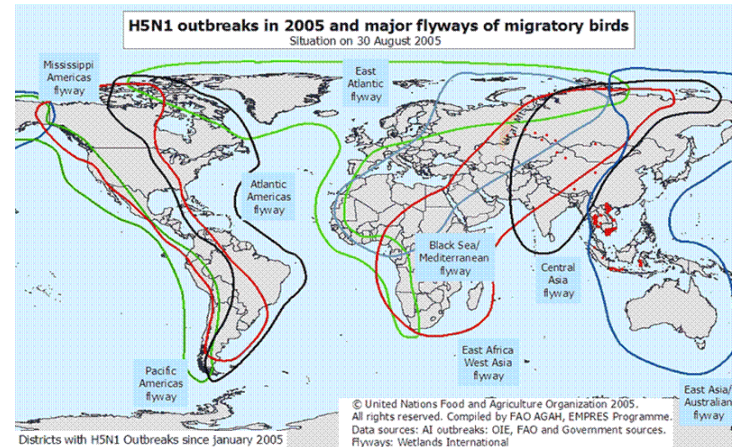
- Document ALL the available existing information pertaining to HPAI and poultry sector in the study countries
- Identify knowledge gaps to focus research in study countries

## Research project

- Country baseline information, shocks (disease, policy response) and simulation assumptions agreed upon

# Disease Risk

- Base line risk maps
- Risk pathways
- Disease probability models (qualitative and quantitative)
  - Likelihood of entry of HPAI virus and exposure of domestic poultry?
- Spatial spread models
  - Potential pathways of HPAI spread to poultry and the likelihood that this will happen?
  - Likelihood of HPAI becoming endemic and how would the risks / control strategy change?





# Livelihood impacts

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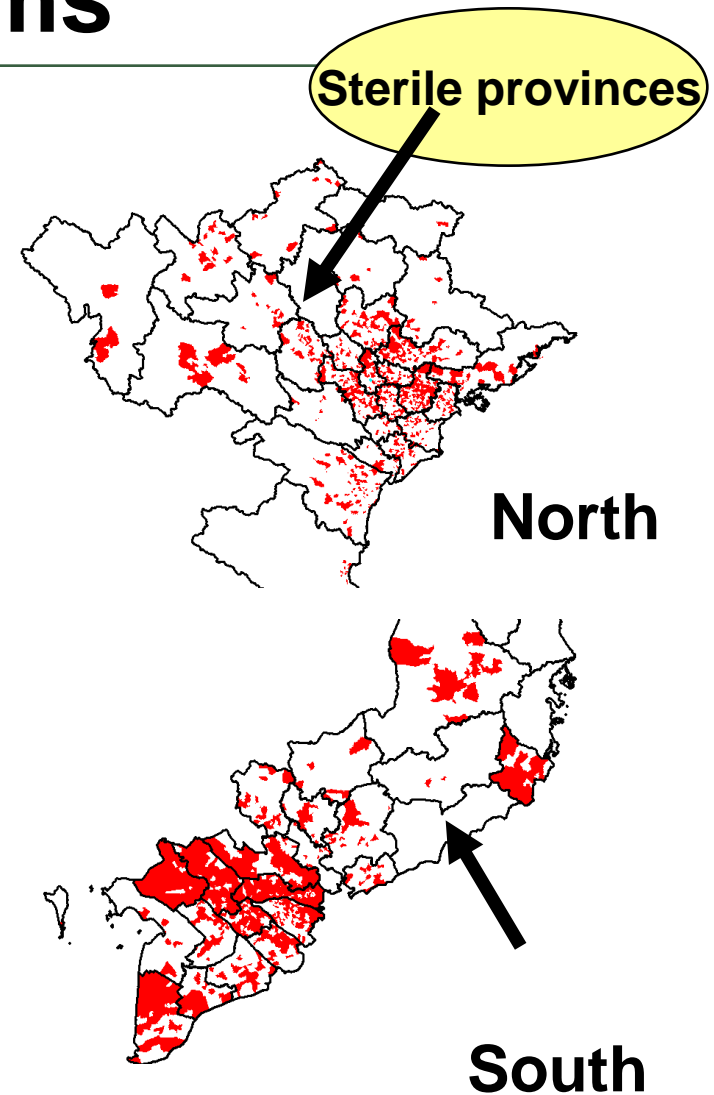
- Economic: poultry sector and beyond
  - CGE analysis and multi-market analysis
- Livelihoods (qualitative and quantitative) and nutrition
  - Household level analysis
  - Nutritional analysis





# Institutional mechanisms

- Assessment of role and effectiveness of various institutions in control efforts
  - Institutions (eg animal health services, MARDs, regional organizations)
  - 'Top-down' surveillance vs 'bottom-up' disease reporting
  - Public vs private sector engagement
  - Compensation vs adjustment support
  - Farm- vs value-chain focused approaches for disease control
  - National vs international responsibilities and cost sharing
- Assessment of the costs and risk reduction effects of various policies, reforms and institutional changes on disease risk to date;
- Behavioral experiments to see what works under specific situations



Source: Pfeiffer *et al.*, 2005

# Synthesis Analysis: effectiveness of control and impact on livelihoods



- Control options in terms of effectiveness and relation to structure of the poultry industry and animal health system capacity
- Differential social and economic impact of chosen control strategies
- Incentives for compliance / non-compliance across actors

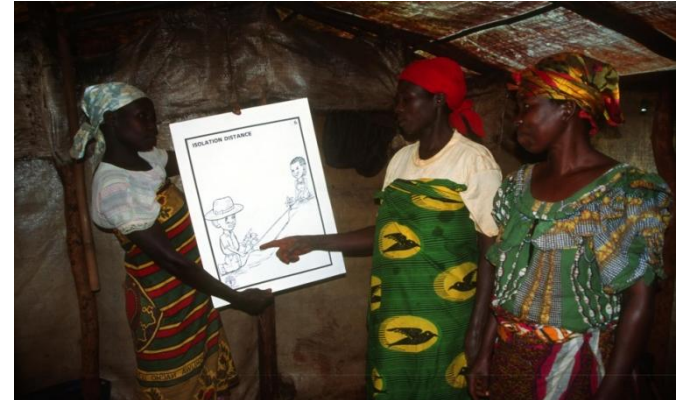
# Synthesis Analysis

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- Inventory for each country of available cost and benefit data
- Cost/benefit analysis of various prevention/ control risk management options
- Cost/effective analysis of risk management options
- Risk analysis paradigm
- Simulation analyses capturing the effect of various risk management strategies on:
  1. biological efficacy of disease
  2. economic efficiency
  3. social desirability
  4. political feasibility

# Risk Communication

- Assessment of information needs / gaps of different stakeholders
- Identification of appropriate communication channels for different target audiences (e.g. women & children)
- Development of simple decision support tools as an interface for stakeholders to use information
  - network maps



# Project Oversight / Management

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## **Internal:** Thematic responsibilities (IFPRI/ILRI)

- Background papers: National partners
  - Clare Narrod (IFPRI)
- Technical areas
  - Disease risk: Dirk Pfeiffer (RVC)
  - Livelihood impacts: Xinshen Diao (IFPRI)
  - Institutional mechanisms: Jeff Mariner (ILRI)
  - Synthesis analysis: Clare Narrod (IFPRI)
- Translation of research into policy action:
  - Klaus von Grebmer (IFPRI)

# Country Coordinators

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- Nigeria
  - Iheanacho Okike
- Ethiopia
  - Shahidur Rashid/Devesh Roy
- Indonesia
  - Fred Unger
- Ghana
  - Shashidhara Kolavalli, /Ekin Birol
- Kenya
  - Amos Omore

# National collaborators (so far)

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- Nigeria

- University Ibadan-FAO
  - Timothy Obi
- Cambridge University
  - Adewale Oparinde
- Ministry of Agric. – Zamfara State-FAO/CIRAD – Garba Maina

- Kenya

- KIPPRA
  - John Omiti
- FAO
  - Samuel Okuthe

- Indonesia

- University of Bogor
  - Arifin Bustanul
- Gadjah Mada University
  - Bambang Sumiarto

- Ghana

- University of Ghana
  - George Anning
  - Sam Asuming-Brempong
- University of Cape Coast
  - PK Turkson

- Ethiopia

- Ethiopian Institute for Agricultural Research
  - Dawit Alemu
  - Setotaw Ferede
  - Tamirat Degefo

# Country Champions – linking to policy making

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- Nigeria
- Ethiopia
- Indonesia
- Ghana
- Kenya



# Principles

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- open for others to join, avoid duplication
- transparent, disclosure of interim findings
- collaborative & trans-disciplinary
- iterative, ongoing adjustments
- constructive peer review
- end-user focused



# Project Oversight / Management

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## **External:** Steering Committee

- Experts in different research domains, individuals tasked with disease control in affected countries and representatives of international organisations
- Charged with providing guidance to the project to ensure that the research conducted:
  - addresses issues relevant to decision-makers;
  - is scientifically sound,
  - is practical and transparent, and
  - expediently finds its way into national, regional and global decision making processes.

# Steps so far

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- **December – January:** ‘recruit’ national partners and agree on ways and areas of collaboration
- **January:** ‘Issues Paper’ on main issues addressed by project
- **January:** Inception workshop in Bangkok
- **Spring:** ‘Background Papers’ prepared for each project country (output1)
- **Summer:** Country kick-off meetings to introduce project to stakeholders and agree on major gaps

# Next steps (cont.)



- Research-country baseline information, shocks (disease, policy response) and simulation assumptions agreed upon – stakeholders would find useful
- Define type of research approach and data needs
  - Chose specific methodologies
  - Design survey instruments
  - Link outputs
- Net mapping exercise (tbd- communication strategy amongst stakeholders, institutions, etc.?)





<http://www.hpai-research.net>

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