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

Overview

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

Motivation

- 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

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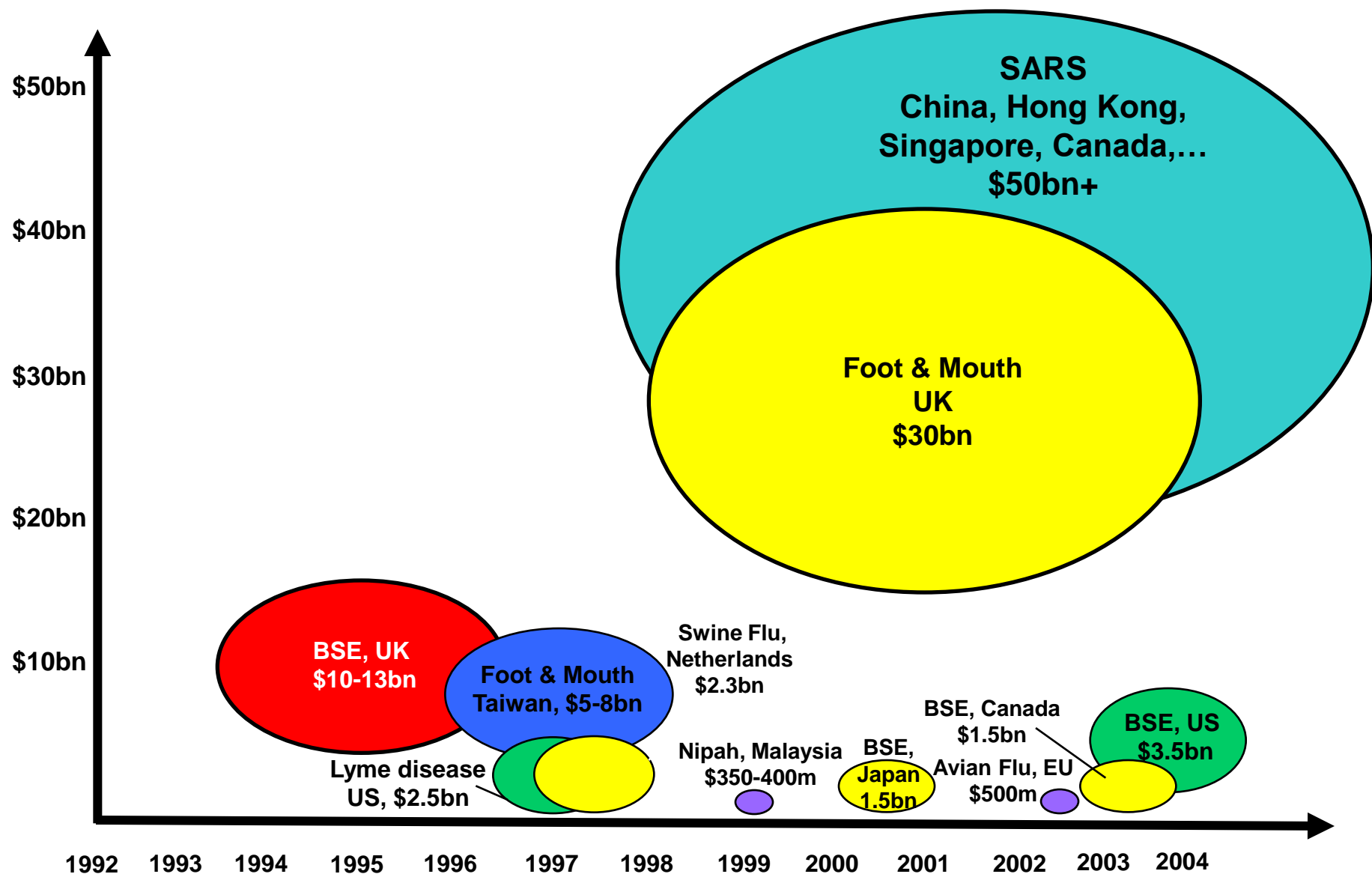 - rural populations
  - urban populations

Disease and control measures

- 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

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

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

1. Provide scientific basis for
   - cost-effective, and
   - 'equitable'

   HPAI control strategies,

2. 'Inject' insights into
   - national,
   - regional and global

   policy processes, **<u>and</u>**

3. Build capacity for evidence-based formulation of disease control policy

Scope of Research

- 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…

- <u>Methods developed by the proposed research will be general, and applicable to other potential disease threats and regions</u>

Regional / Country 'Responsibility'

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

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

Our Strategy

- 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

Disease Risk

Synthesis Analysis

Livelihood impact

Institutional challenges
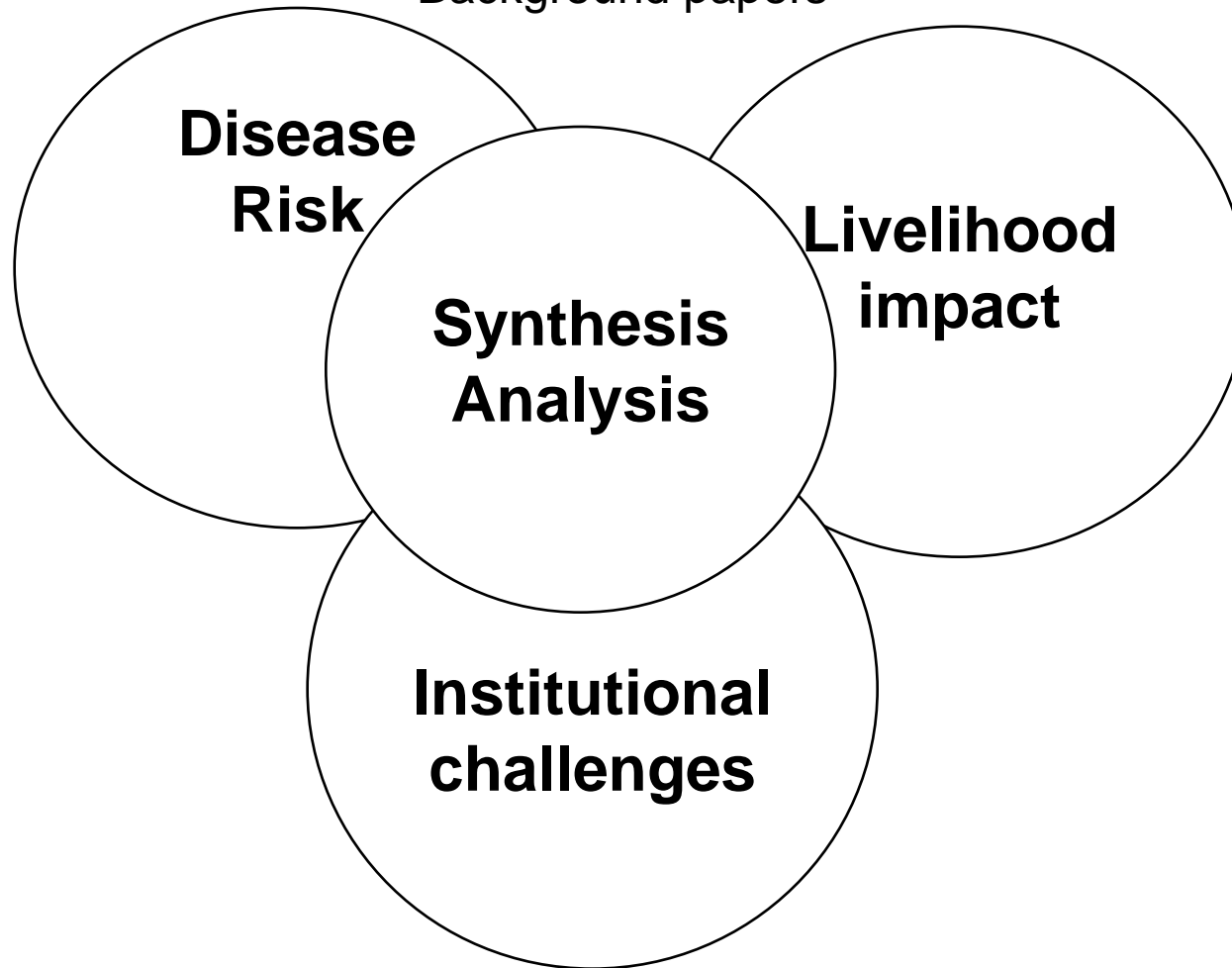
Risk communication and decision support tools

Background papers

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?
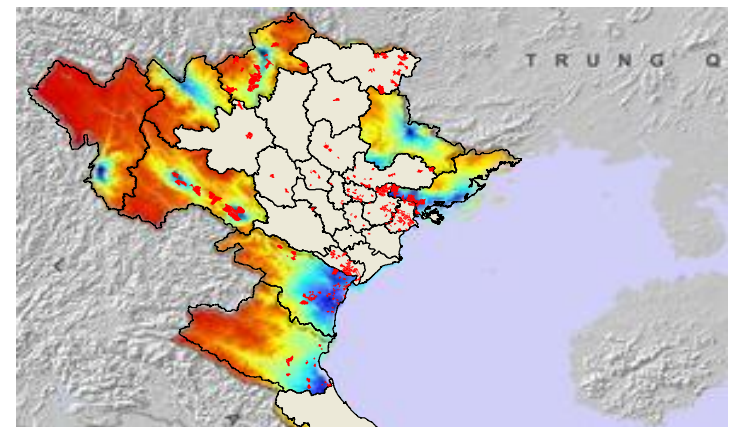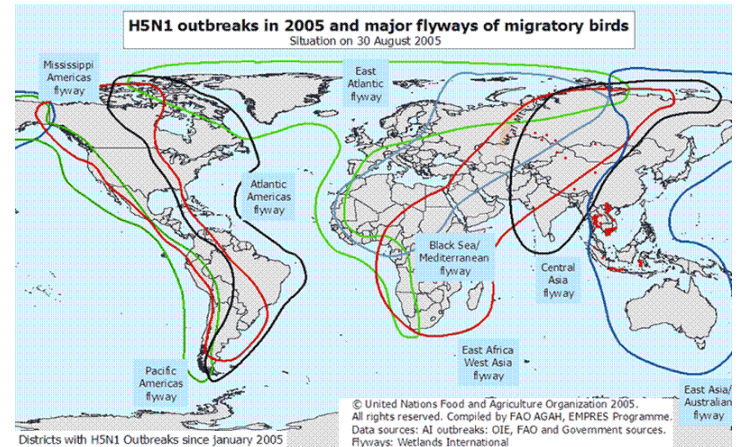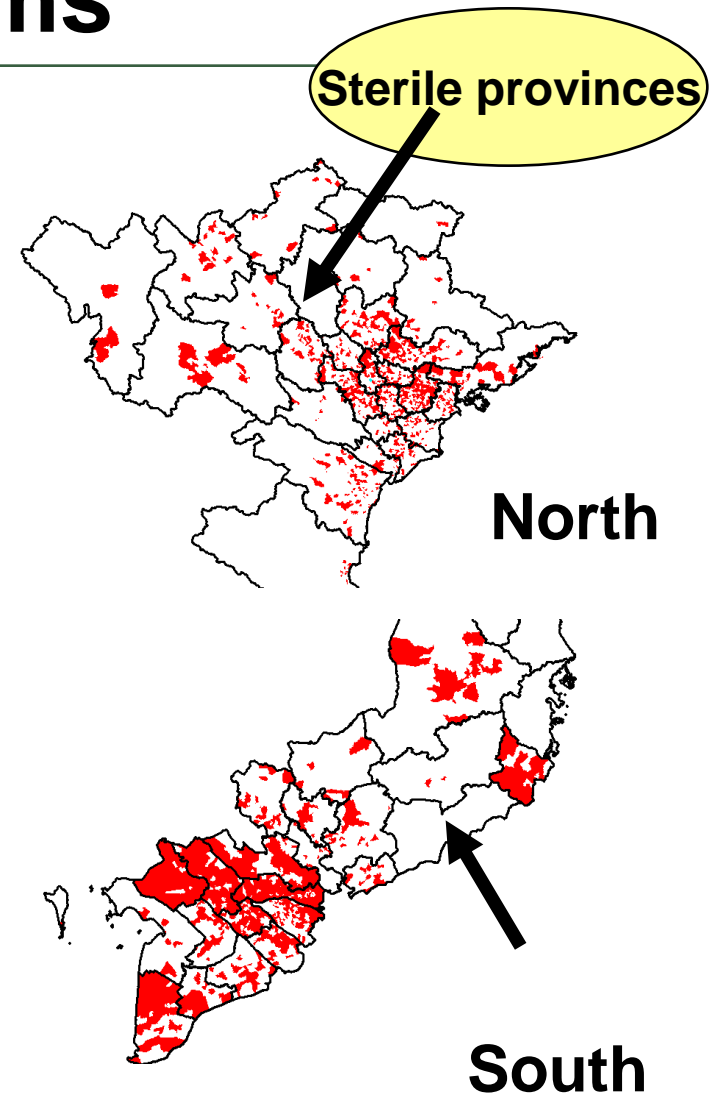
Livelihood impacts

- 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

Sterile provinces

North

South

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

- 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
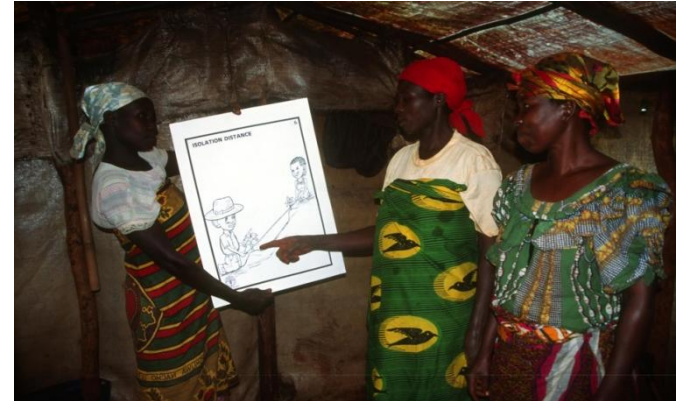
Project Oversight / Management

<u>Internal</u>: 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

- Nigeria
  - Iheanacho Okike
- Ethiopia
  - Shahidur Rashid/Devesh Roy

- Indonesia
  - Fred Unger

- Ghana
  - Shashidhara Kolavalli, /Ekin Birol
- Kenya
  - Amos Omore

National collaborators (so far)

- 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

- 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

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

Country Champions – linking to policy making

- Nigeria

- Ethiopia

- Ghana

- Kenya

- Indonesia

Principles

- 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

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

- **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 fine 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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