

Controlling Avian Flu and Protecting People's  
Livelihoods in the Mekong Region

# Assessing Smallholder Producer Viability After HPAI in Lao PDR

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# Introduction and Motivation

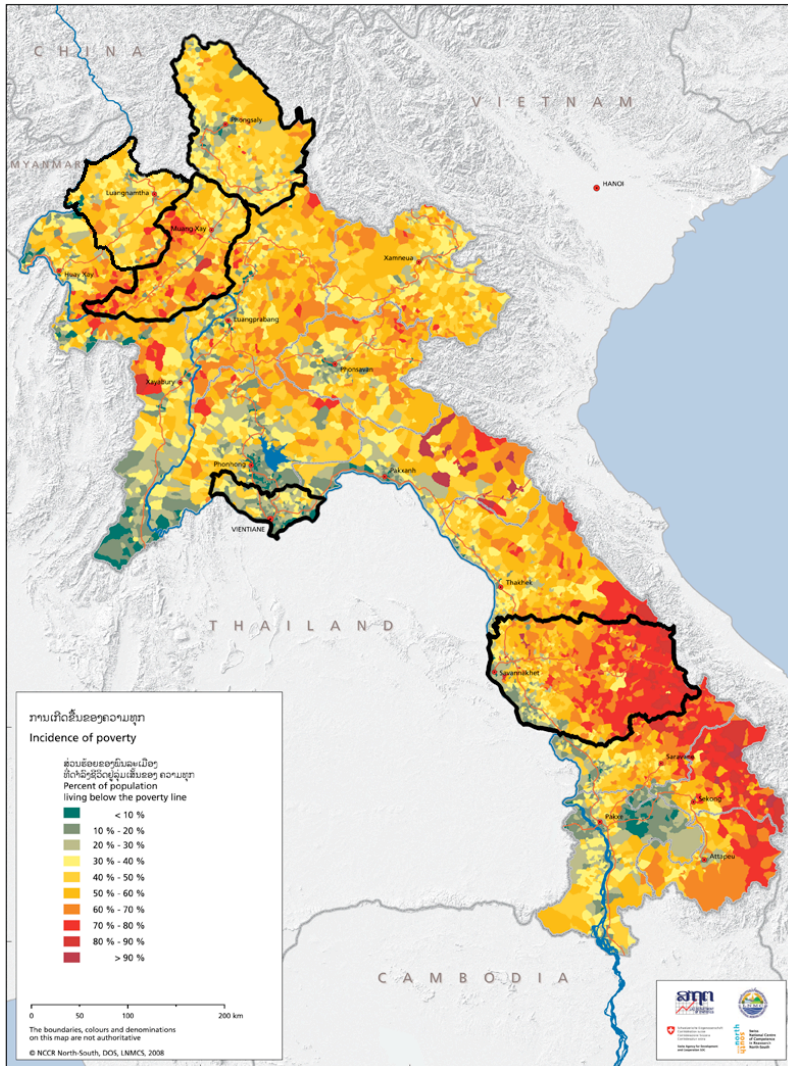
- Smallholder poultry production is ubiquitous in Lao PDR and is a crucial income generating opportunity for one of the poorest countries in the GMS
- HPAI outbreaks in Lao PDR have adversely affected smallholder production, harming livelihoods
- Information and data on smallholder production is limited, demonstrating the need for further research in this sector

# Introduction and Motivation

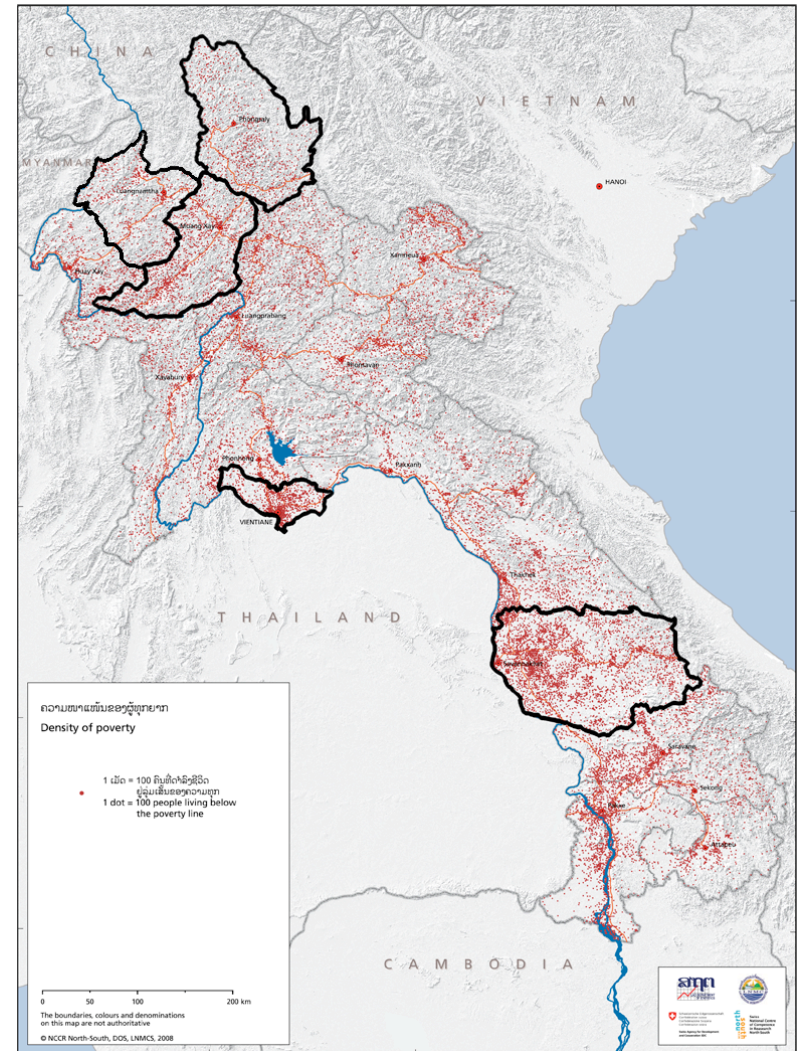
- This information gap seriously undermines effective monitoring and control of HPAI, and a regionally coordinated effort is needed
- Livelihoods are at stake and an in-depth understanding of the smallholder poultry sector is needed to insure control policies do not adversely affect production
- Survey work in Lao PDR aims to support evidence based solutions to these problems

# Background: Poverty Profile

## Incidence of Poverty



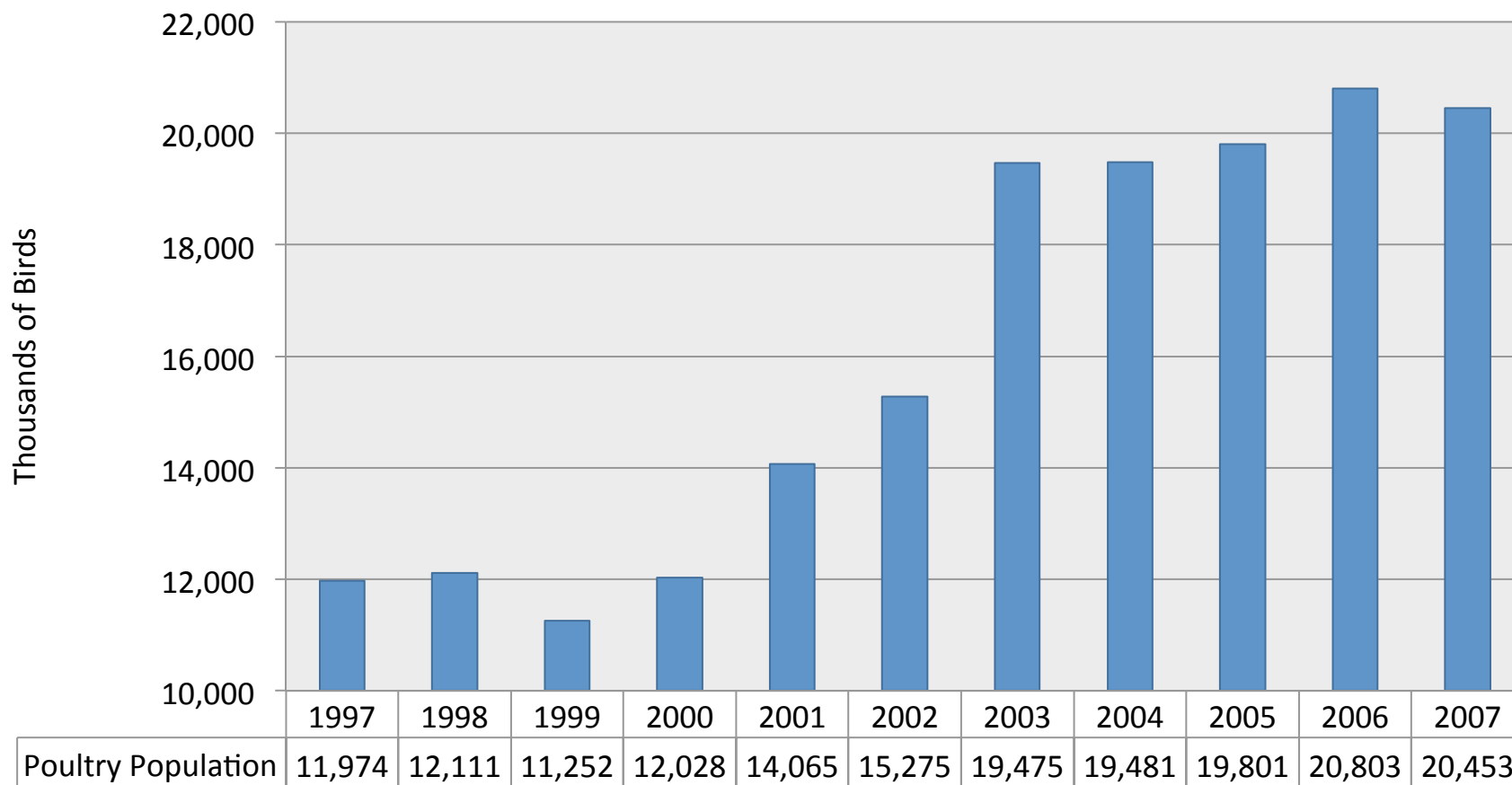
## Poverty Density





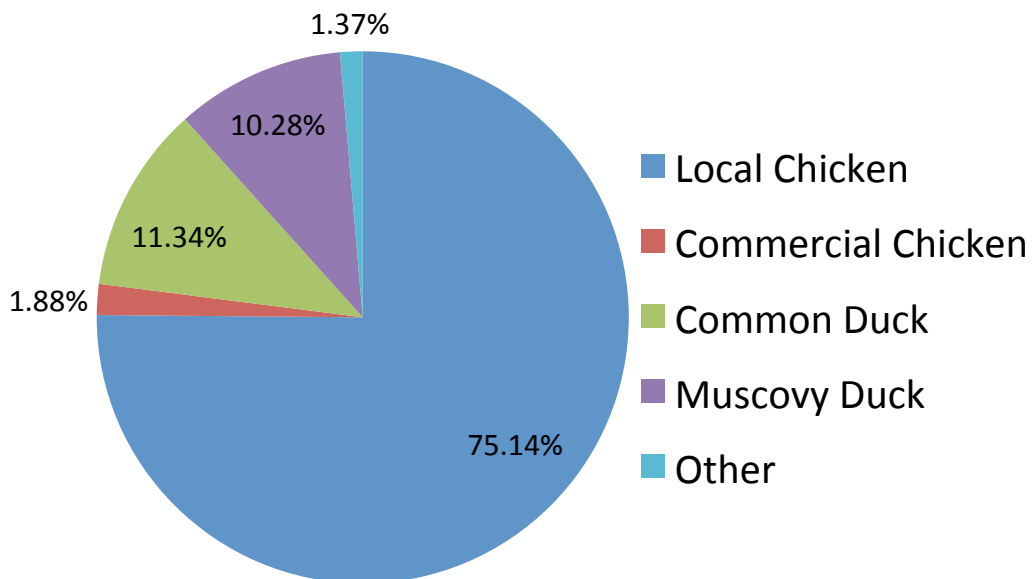
# Background: Lao PDR Poultry Sector

**Poultry Population in Lao PDR, 1997 – 2007**

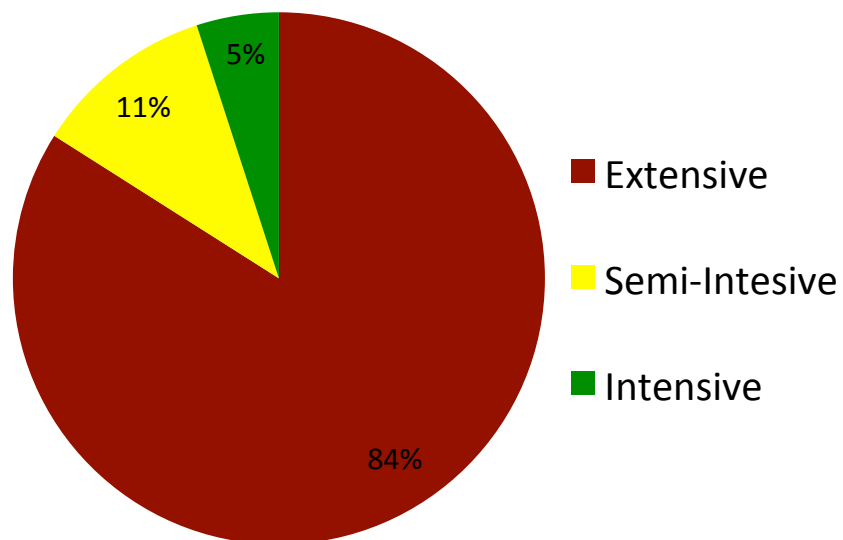


# Background: Lao PDR Poultry Sector

**National Poultry Flock by Type, 2007/08**

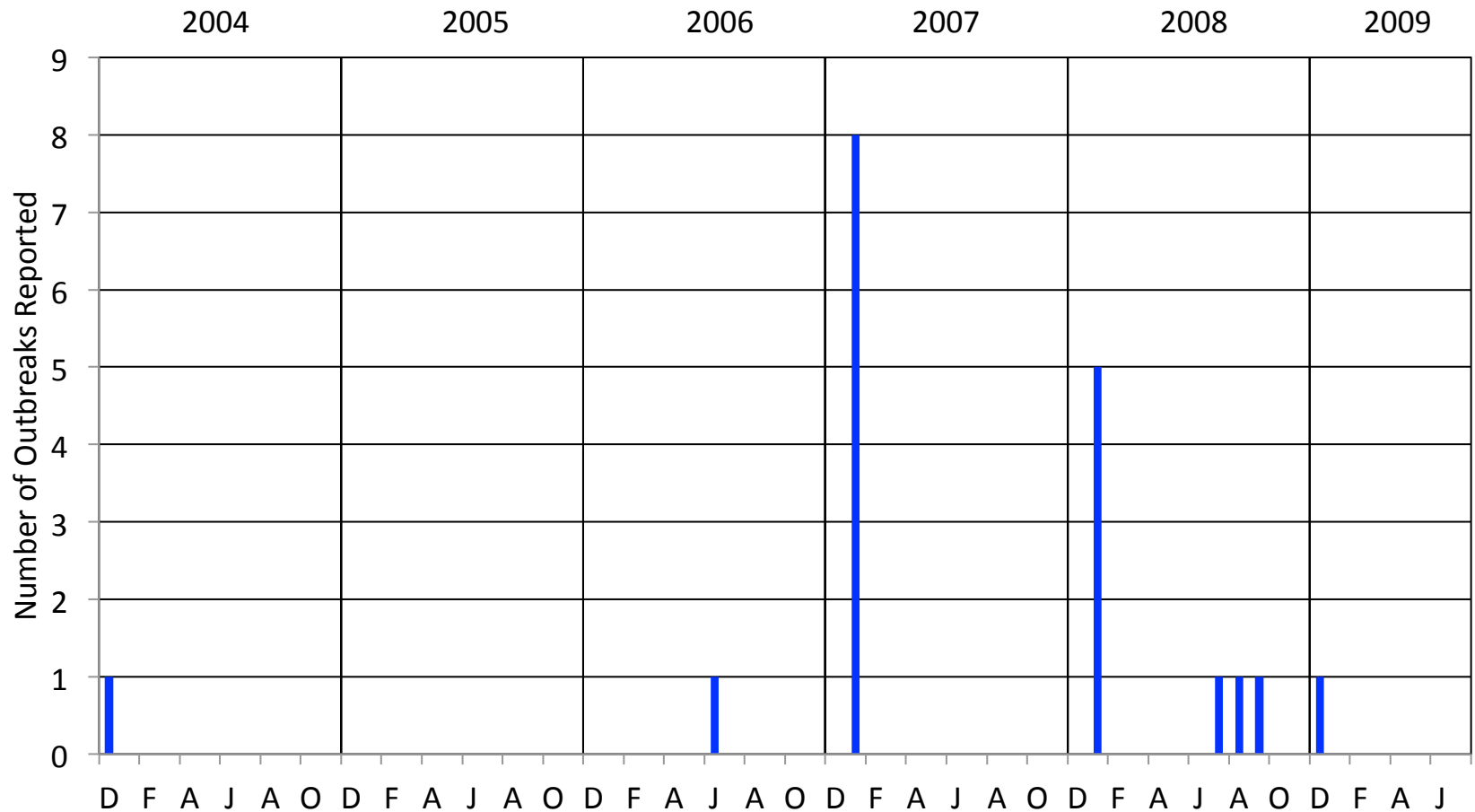


**Poultry Population Distribution by Production System, 2006**



# Background: HPAI in Lao PDR

Temporal Patterns of HPAI Outbreaks, 2004-2009



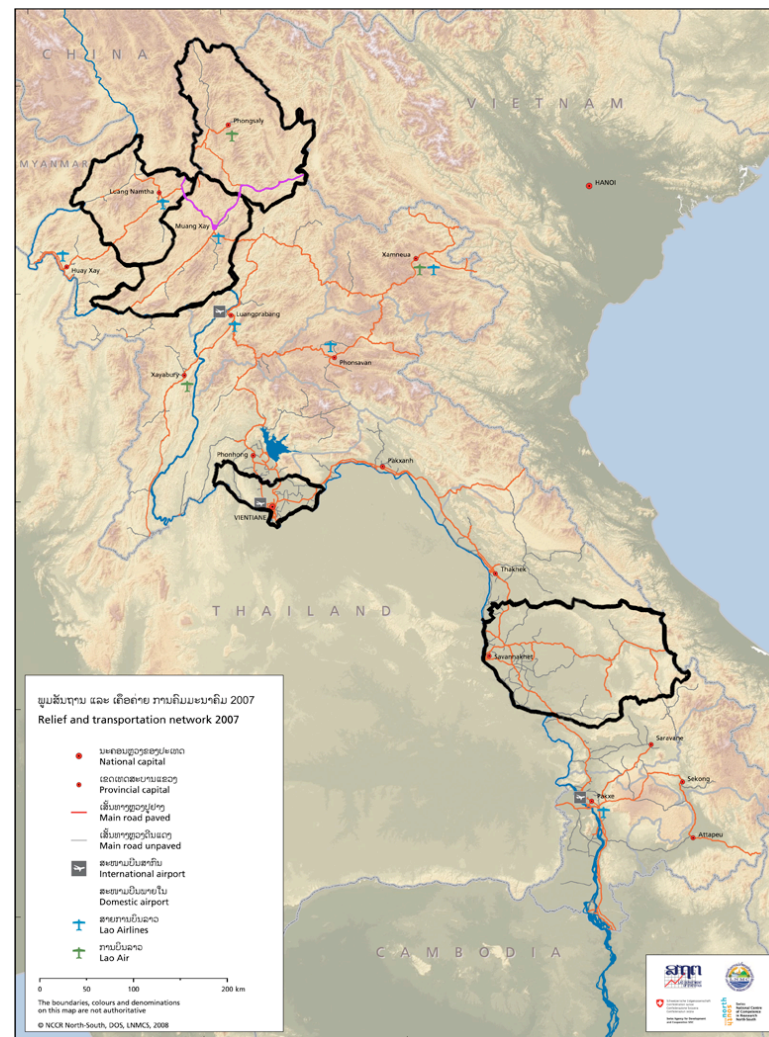
# Lao PDR Surveys

- Questionnaires in Lao PDR are based on those previously conducted and will be implemented at four levels: producers, traders, vendors, and consumers
- Questionnaires have been expanded with an increased focus on agriculture production, scavenging systems, pricing information, mobile phone use, cross-border trade, financial access and capital constraints, and micro-contracting
- The questionnaires will be conducted in Northern, Central, and Southern Lao PDR, spanning three distinct geographical regions



# Lao PDR Survey Locations

- Northern Lao PDR:
  - Luang Namtha, Oudomxay, and Phongsaly
- Central Lao PDR:
  - Vientiane Capital
- Southern Lao PDR:
  - Savannakhet (implementation beginning in April)

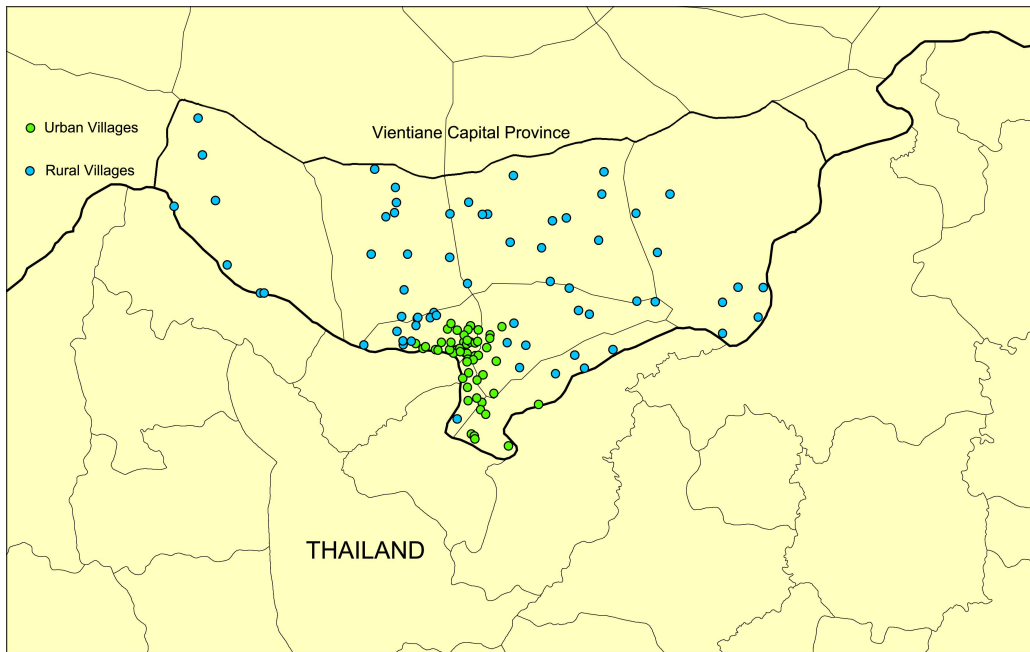


# Sample Design

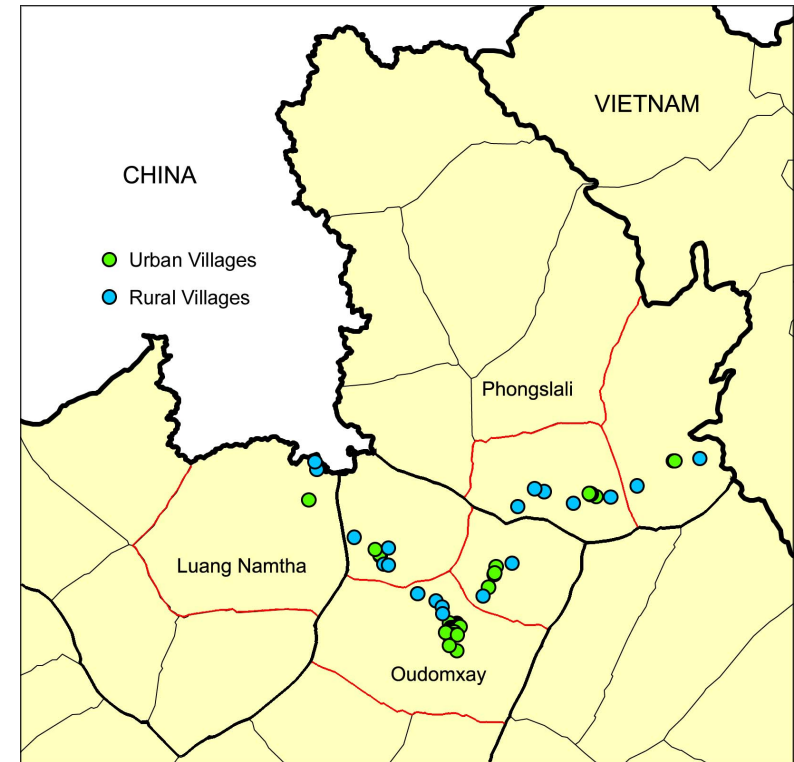
- Sample was split between government classified urban and rural villages
- Sample was drawn from 2 sources
  - Lao Expenditure and Consumption Survey (LECS)
  - PPS: Additional villages were selected using a probability proportion to size methodology
- Total:
  - Vientiane: 128 Villages in 9 districts
  - Northern Lao PDR: 60 Villages in 6 districts

# Survey Village Locations

## Vientiane



## Northern Lao PDR



# Survey Implementation

- Survey implementation was split between rural and urban areas:
  - Rural Areas: Resource Flow Surveys
    - Enumeration teams visited sample villages and met with village chiefs to locate large producers and traders
    - After attempting to locate large producers and traders, enumerators conducted smallscale surveys until 16 producer observations per village were recorded
    - Due to the prevalence of Chinese egg vendors in Northern Lao PDR rural vendor surveys were collected



# Survey Implementation

- Urban Areas: Consumer and Resource Flow Surveys
  - Enumeration teams visited sample villages and meet with the village chiefs to locate any large producers or traders
  - If none exist, or after they are found, enumerators conducted consumer questionnaires
    - 16 Observations per village split between 14 consumers and 2 producers
  - Enumerators conducted vendor and trader questionnaires at the wet markets that serve the sample urban villages

# Survey Observations

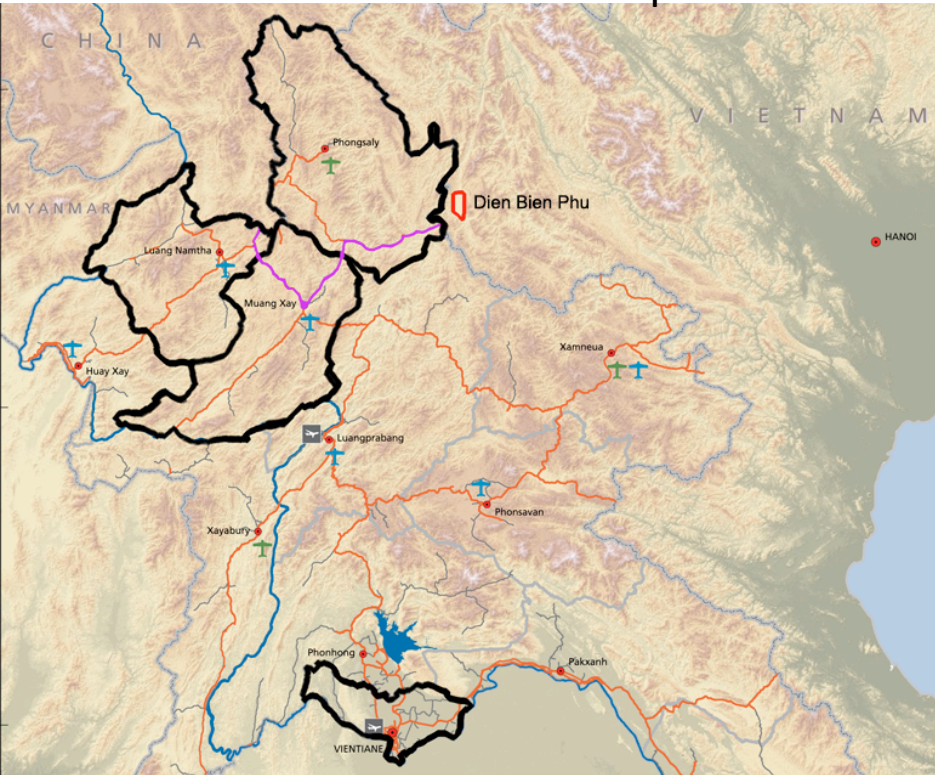
	Vientiane	Northern Lao PDR	Total
Smallscale Producers	1,064	437	1,501
Largescale Duck Producers	26	1	27
Largescale Chicken Producers	71	14	85
Aggregators	32	33	65
Market Vendors	98	49	147
Resource Flow Total	1,291	534	1,825
Consumer	786	520	1,306
Grand Total	2,077	1,054	3,131

# Northern Lao PDR: Background

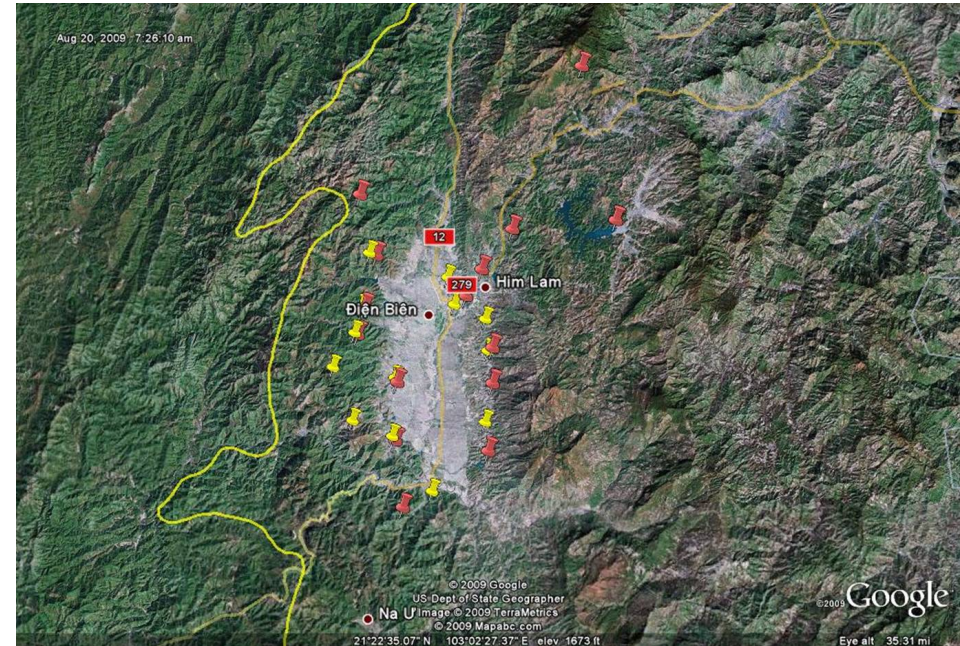
- Additional motivation for surveys in Northern Lao PDR is to track poultry trade flows between China, Lao PDR and Viet Nam
- Phongsaly province borders Dien Bien Phu, Viet Nam, which has been home to numerous outbreaks of HPAI including a recent November and January outbreak
- It's possible that poultry trade from China through Lao PDR and into Viet Nam are responsible for Dien Bien Phu's high HPAI activity

# Northern Lao PDR: Background

Northern Lao PDR Map



Dien Bien Phu HPAI Outbreak Map





# Findings from Northern Lao PDR

- Muang Xay, Oudomxay
  - Trade hub in Northern Lao PDR
  - Chinese goods are prevalent, as are Chinese poultry products
  - Imports of Chinese eggs, chicks, and ducklings are legal
  - Several large farms are owned and operated by Chinese that source birds from China

# Findings from Northern Lao PDR

Chinese operated layer farm in M. Xay



# Findings from Northern Lao PDR

- Muang Khua, Phongsaly
  - Largest town on Route 2E, which connects Oudomxay and Dien Bien Phu
  - Home to Lao PDR's most recent HPAI outbreak in January 2009
  - Large Chinese presence, confirmation that Chinese birds from Oudomxay were sold in town before the HPAI outbreaks



# Northern Lao PDR

Chicken on the bus from Oudomxay to M. Khua



Chinese Truck filled with Chinese Products In M. Khua



# Findings from Northern Lao PDR

- M. Mai, Phongsaly
  - Second largest town on route 2E and district capital of the Mai district immediately adjacent to Dien Bien Phu
  - Located vendors that were selling Chinese eggs from Oudomxay



# Dien Bien Phu, Viet Nam

- Large presence of ethnic minority groups are a unique feature to DBP
  - City center is predominately Vietnamese, while the surrounding areas are ethnically Tai and Hmong
  - Together the Tai and Hmong represent over 50% of the population in DBP
  - After speaking with a few Tai farmers we found a women who regularly crosses the Lao/Vietnamese border by foot and recently brought back 30 kg of chicks



# Dien Bein Phu, Viet Nam

Sign Marking the border area with Laos, comprised of mainly Tai Villages



Tai Woman who brought birds from Laos





# Main Findings from DBP/Northern Lao PDR

- Trade cannot be ruled out as a possible source of HPAI infection
- Chinese poultry products are ubiquitous in Lao PDR, and Chinese eggs were located 35 km from the Vietnamese border
- In DBP it became clear that it is very common for Tai people to informally walk across the border to visit relatives in Lao PDR and birds from Lao PDR must enter from time to time
- Adding further complication is the close integration of ethnic groups in DBP

## Initiatives for the North

- In Lao PDR:
  - Surveys assessing trade flows and poultry production were conducted starting in Muang Xay and in villages along Route 13N & 2E
- In Viet Nam:
  - Assessment of the different roles ethnic groups play in poultry production
  - Mapping of the DBP Valley by ethnic group to look for HPAI outbreak pattern
  - Surveys should be conducted on Vietnamese side to match with Lao PDR data

# Southern Lao PDR

- Surveys will be conducted in Savannakhet Province beginning after Lao New Year in April.
  - Emerged as important trade hub in Southern Lao PDR with the development of Route 9, linking Thailand and Viet Nam
  - Most populous province, comprised of smallscale subsistence farmers
  - Diverse sample with developed urban market, Mekong flood plane, mountainous areas, and borders with Thailand and Viet Nam

# Expected Outcomes

- Determine the total inputs and outputs in poultry production and marketing
- Find consumer preferences for various types of poultry products
- Show that financial and capital constraints among smallholder poultry producers creates a burden for restocking poultry flocks and increasing biosecurity
- Establish that a micro-contracting system overcomes the problems of market access, capital constraint, quality incentives, and bargaining disadvantages
- Demonstrate that the smallholder sector is a viable alternative that millions of rural poor will continue to rely for their livelihoods

# Looking Ahead

- Implement a pilot project where smallholder producers form a village level cooperative
- This cooperative would link directly with market vendors, creating a reliable and efficient production system that provides increased revenues to producers and a regular, high-quality source to vendors
- Use randomized controlled trials to monitor the effects between sample and control villages

# Thank you!

