

Livestock disease and livelihoods vulnerability: the case of HPAI

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Overview

- n Poultry and livelihoods
- n The disease
- n FAO's HPAI socio-economic group
- n Examples of some past FAO work on HPAI & Livelihoods
- n Areas of ongoing work
- n Broad lessons/questions: Control processes
- n Broad lessons/questions: Impacts on livelihoods
 - n from disease outbreaks
 - n from control processes
- n Broad lessons/questions:
What can we do to reduce negative impacts?



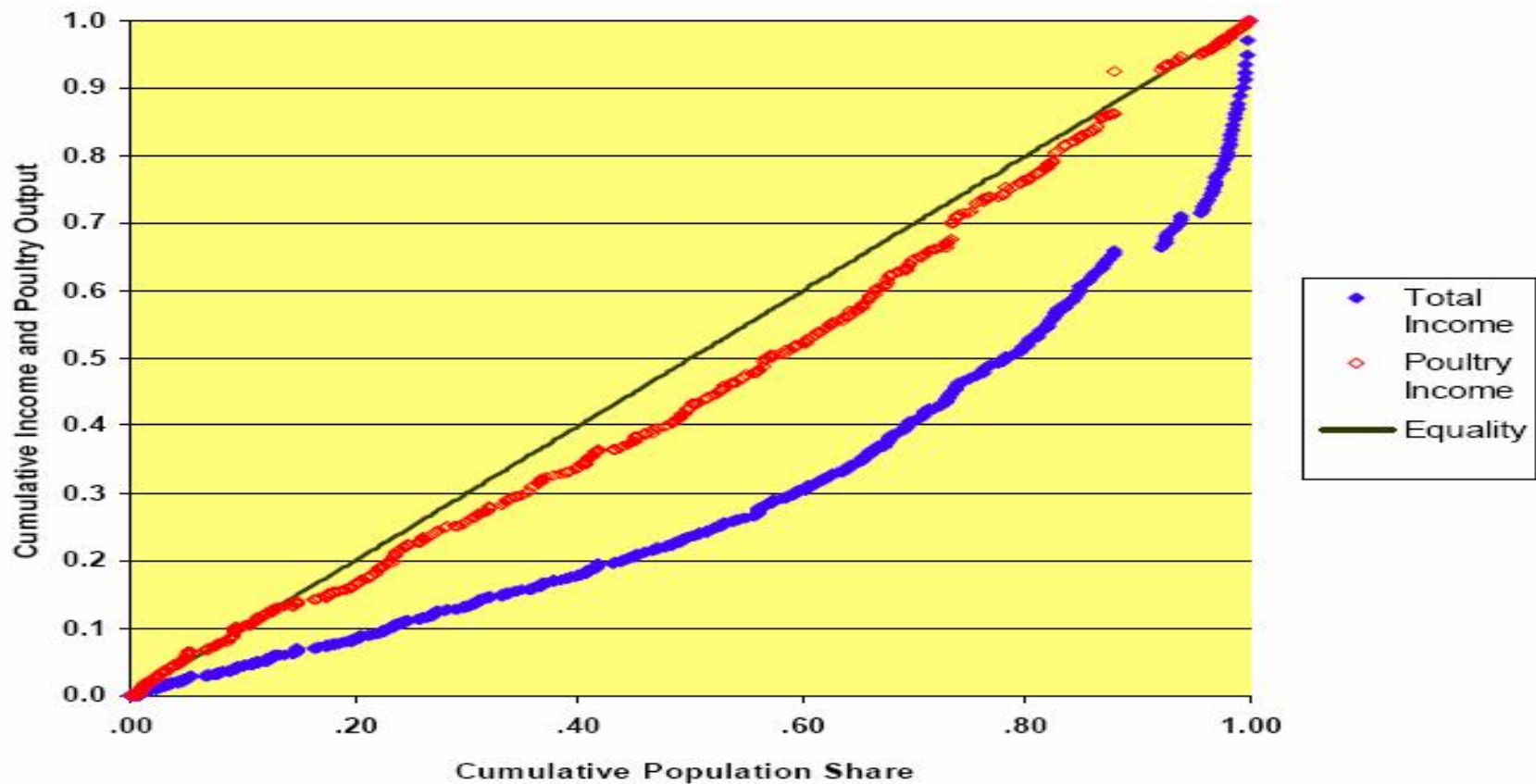
Poultry & Livelihoods

- n Low cost of entry into sector
- n Impressive returns (Vietnam estimates: 600 to 700 percent return!)
- n Easy maintenance of scavenging chickens
- n Nutrition
- n A very liquid asset



Poultry's equity effect

Figure 1: Income Distribution in Viet Nam



Source: FAO PPLPI



Characteristics of HPAI

- n Transboundary
- n Notifiable to OIE (all H5 and H7 subtypes, others if they show high pathogenicity)
- n High mortality in chickens
- n Zoonotic (people can catch it) - small # human deaths so far
- n Possibility a human flu pandemic may originate from HPAI



FAO's HPAI socio-economic group

- n ECTAD: FAO's HPAI response team
- n ECTAD-SEP: the socio-economic wing
- n Now showing at a theatre near you: ECTAD-RAP in Bangkok



Poultry production systems SEA

	1 Industrial	2 Large commercial	3 Small commercial	4 Backyard
Cambodia		<1% poultry	<1% poultry	99.9% farms, 90% poultry
Indonesia	3.5% poultry, export & national consumption	21.2% poultry	11.8% poultry	63.4% poultry
Lao PDR		Small	10% poultry	90% poultry
Thailand	70% production, export important	20% production	10% production, 98+% producers	
Viet Nam	Small	20-25% production, few producers	10-15% production, few producers	65% production, possibly 70% of poultry

Example of past work 1

- n Investigation of socio-economic outcomes in the aftermath of outbreaks in 2004
- n Cambodia, Laos, Vietnam and Indonesia
- n Sector 3 hardest hit in many countries – small, relatively specialized producers with minimal profit margins
- n Backyard producers more resilient than imagined. Nevertheless heavily affected in some countries.
- n Strong price effects in some countries.

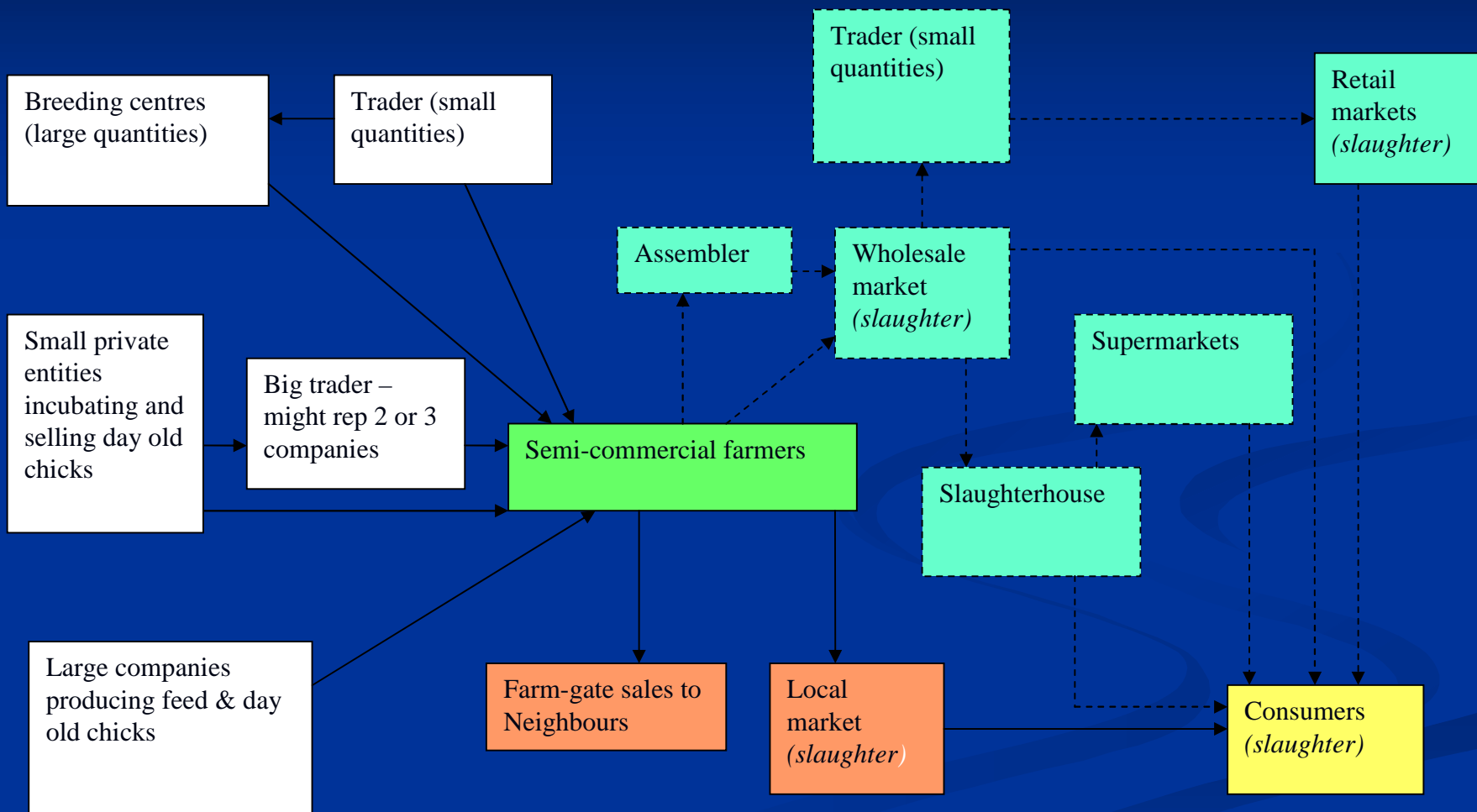


Example of Past Work 2

- n HPAI & control reshapes marketing chains
- n Winners and losers exist beyond the farm gate
- n Commissioned a study on 'value chains' for poultry in Vietnam
- n Found post-AI restructuring leading to market collapse not only for sector 3 and 4 producers, but also for a variety of assemblers, traders and wholesalers



Increasing regulations raises market barriers for small commercial producers..... (Vietnam)



—————> activities/linkages still operating - - - - -> no longer operating



Current Portfolio of Activities

- n 1) Financing of avian influenza control. This includes:
 - n a) emergency advice to governments on compensation strategies
 - n b) longer term analysis and dialogue on costs of control and funding mechanisms under different mixtures of control measures and different disease scenarios

- n 2) Social and economic impacts at micro/meso level, including
 - n a) micro-economic impacts, particularly on small scale producers and operators, of both emergency measures and longer term biosecurity regulations



Current Portfolio of Activities

- n b) food security impacts (linked to a)
- n c) the future of the poultry sector, in particular the possible changes in the structure of the sector as a result of HPAI

- n 3) Trade impacts and market shocks
 - n a) international, in terms of trade flows and price fluctuations
 - n b) national and local, in terms of price changes, demand fluctuation - and the measures that could be taken to mitigate these shocks



Control process



General principles....

n Look for disease

surveillance and emergency reporting

n Control the first outbreaks

culling, ring vaccination, compensation, movement control

n If it cannot be controlled quickly, deal with widespread disease

wide scale vaccination

n Longer term measures

biosecurity of farms and market chains; changes to the structure of the poultry sector



Details of control process need to be adapted to production system...

Poultry systems

- n Industrial – One species, high biosecurity
- n Large commercial – One species, dense
- n **Small commercial – Diverse species, small flocks**
- n **Backyard – Mixed free range**
- n Specialist – Fighting cocks, cage birds



Impacts of outbreaks



Loss of assets....

- n Total losses greatest for industrial and large commercial producers, but...
- n Small commercial producers lose a major asset, unable to repay debts.
- n Owners of scavenging flocks are least likely to be compensated for loss.



Loss of income through market shock.....

- n **IRAQ**, only 50 out of 500 semi-commercial farms continued operating
- n **EGYPT**, the poultry industry is reported to have lost 30% of its numbers and 35% of its value
- n **INDIA** reported consumption drops of 25%, causing a 12-13% fall in domestic prices
- n **BRAZIL**, the price of day old chicks fell by 50% although there has been **no outbreak**



Loss of food.....

- n Direct loss of food is minimal except
 - n if an outbreak is widespread or recurs quickly
 - n for poor people in rural areas with limited food choices
- n Loss of income to buy food affected by the outbreak and the control process



Impacts of control processes



Looking for disease

- n Needs “eyes” in the field, well informed general public, procedures and technology to report cases, rapid response to reports
- n These things seldom all in place in developing countries
à disease spreads.



Culling...

Culling alone, or culling
with ring vaccination?

GOVERNMENT PAYS FOR
culling, disinfection, compensation
for culled birds.

PRODUCERS, TRADERS, OTHERS
lose profits.

How to design an effective
compensation process?



Movement control.....

Usually essential part of control, but can be quite disruptive to livelihoods



Dealing with widespread disease...

Wide scale vaccination may be an option.

Government needs to subsidise smallholder vaccination and/or make vaccine easily accessible to women



Biosecurity of farms and markets...

What is feasible? Investment cost, inconvenience.

What impact will it have on market access for small operators?



What can be done to reduce negative impacts on vulnerable people?



Reduce the numbers of outbreaks

Good surveillance à quick reporting

needs good public awareness, minimise
blame for reporting

treat the village rather than the farm as a
system?

Minimise spread

rapid response to outbreaks

people comply with movement control



Design of emergency control process

Minimise culling, consistent with disease control needs

e.g. use of ring vaccination where possible and effective

Compensate fairly and quickly

if the country can afford it and the financial management systems exist



Reduce market shocks caused by consumers panicking.....

- n **ITALY:** one outbreak, consumption fell by 70%
- n **NEPAL:** no outbreaks, but falling demand in local poultry markets
- n **MAURITANIA:** after an outbreak in Nigeria , poultry prices dropped to 52% of their former level

SOCIAL MARKETING?



Long term questions... biosecurity

Close wet markets OR invest in making them biosecure?

“Monocroppping” of poultry - to reduce risk, large producers invest but smallholders diversify



Long term questions.... poultry sector structure

Rehabilitate? What kind of poultry development programmes can we safely promote?

How much restructuring is really necessary?
How to minimise social and environmental externalities? Production zones or compartments?



Thank you

