

Impact of social and economic constraints on the performances of Highly Pathogenic Avian Influenza surveillance systems in Vietnam and Thailand

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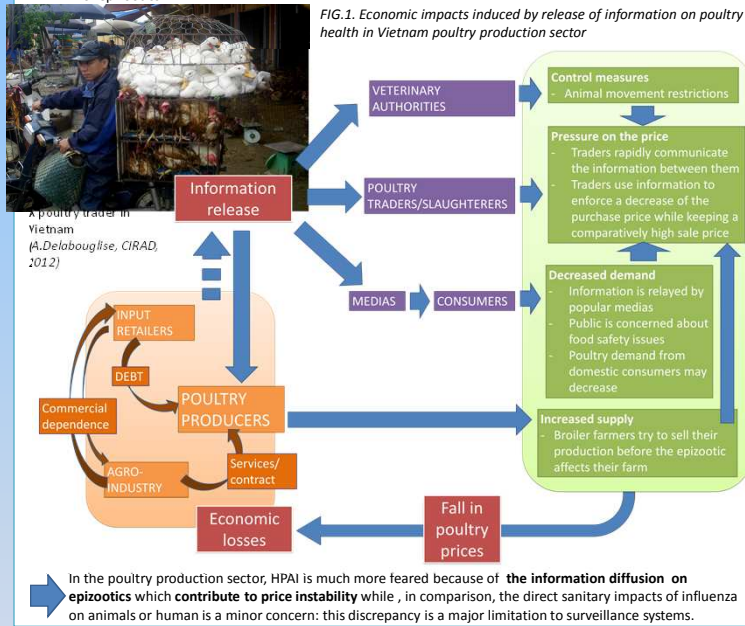


INTRODUCTION : Effectiveness of HPAI control strategies depends strongly on the passive surveillance, also named reactive surveillance, especially in developing countries. This type of surveillance relies on spontaneous reports of disease suspicions by actors of the animal production sector to sanitary authorities. This system, if implemented properly, is considered as the most cost-effective way for early outbreak detection and to gather information on the disease situation for the decision-making on control strategies. However, in practice, sensitivity and timeliness of passive surveillance are often not optimal and under-reporting of suspicious cases is considered as a major source of failure to control HPAI epizootics. The objective of our work was to better understand the socio-economic factors for under-reporting at local level and to provide recommendations for improvement of the systems.

Four case studies were conducted in rural communes from 4 provinces: *Hải Dương* in North of Vietnam, *Đồng Nai* and *Long An* in South of Vietnam and *Sukhothai* in North of Thailand. Samples of 80 to 120 participants representing all the actors involved in poultry health and poultry production were interviewed in each location. Qualitative socio-economic factors were identified using tools from the field of participatory epidemiology. Quantitative analysis of information flows were made using social network analysis.

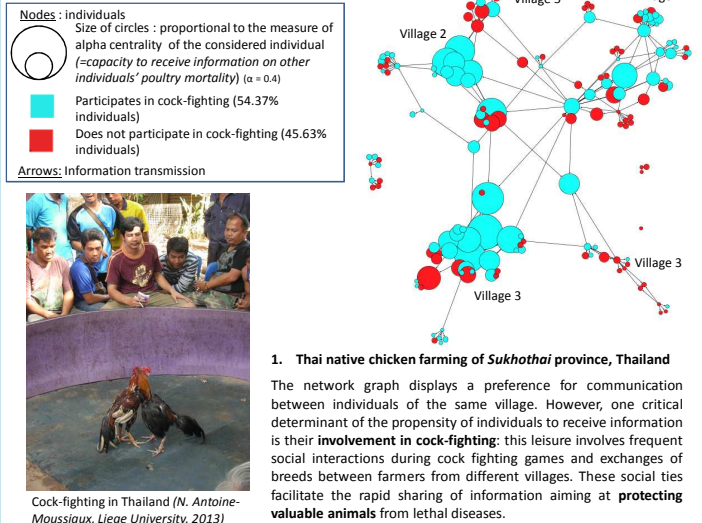
Part I : Economic impact of surveillance in Vietnam

- Information disclosure on poultry disease occurrence may decrease poultry products' market outlets and induce a drop in prices.
- These market disturbances are due to several factors including **medias announcement** and **animal movement restrictions imposed by government**. In Vietnam, **intermediate actors in poultry distribution (traders, middlemen)** often use information on epizootics to lower the prices, and increase their profits.
- Enhancing **trust of the consumer** or importing countries in poultry products is a major issue for the poultry production sector to maintain its markets outlets. The role played by the **medias agencies** is critical.
- Large scale poultry producers** or integrated **agro-industry systems** tend to give more importance to these economic issues. Their will to disclose information is therefore reduced.
- The **sanitary standards** on the poultry value chain are limited, which enables the producers to sell their production at low price in case of disease. This practice is the most common way of mitigating the impact of epizootics.



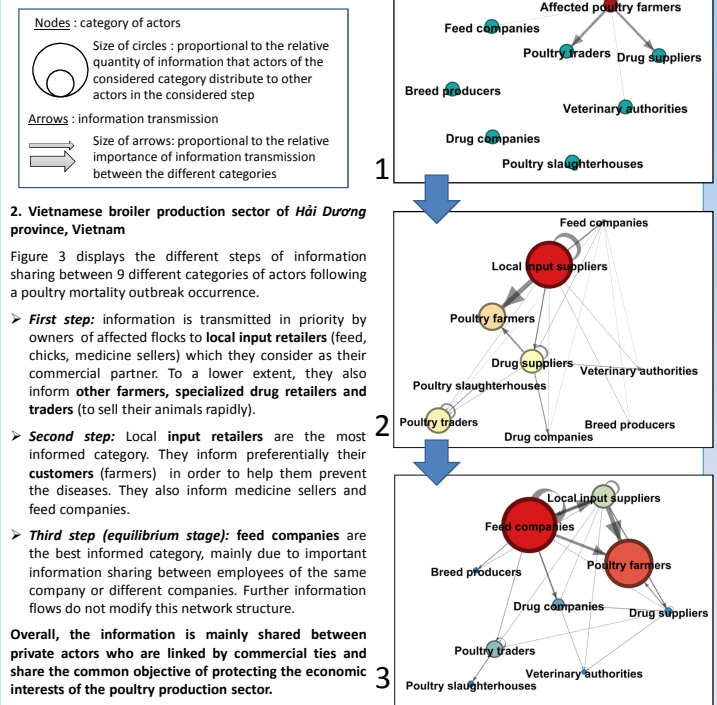
Part II : understanding poultry mortalities information sharing networks through social network analysis

FIG.2. Network of information sharing on poultry mortality in native chicken farmers of a locality of Sukhothai province, Northern Thailand



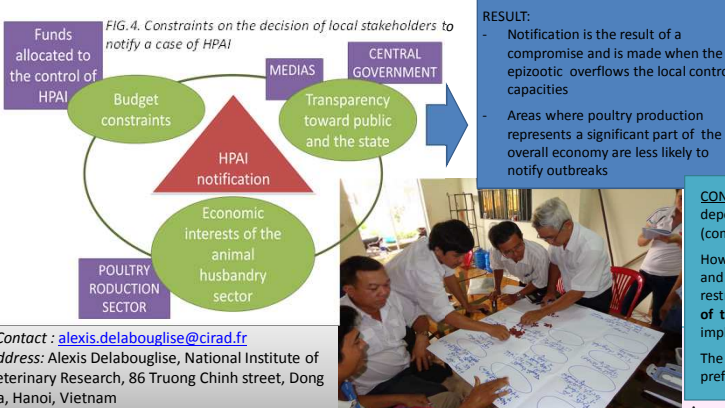
Veterinary services have a limited access to this network, as cock owners fear potential **stamping-out policies**. However, information can be relayed to veterinary services by local **health volunteers and village heads**.

FIG.3. Health information network in the broiler production sector of a rural commune of Hải Dương province, Northern Vietnam



Part III : Administration and surveillance in Vietnam

- Local stakeholders face the constraint of preserving the interests of the poultry production sector while cooperating with the central level for controlling the disease



CONCLUSION: Structures of poultry mortality information networks are specific for each types of poultry production: it depends on social and economic interdependencies which are linked with the features of the considered production type (commercial or recreational purpose).

However, release of information to some specific actors are especially avoided. Vietnamese chicken commercial producers and the agro-industry fear the **spread of epizootic information** to poultry traders, the implementation of animal movement restrictions by authorities and the large media coverage of diseases such as HPAI, factors which contribute to the **instability of the poultry products market**. Thai fighting cock farmers widely object mass culling-based control policies previously implemented which totally contradict the individual value they place on their animals.

The **product quality standards** on the poultry market also has an impact on surveillance: in Vietnam, farmers display a preference for the **rapid sale of their animals in case of outbreak** compared to the potential indemnities from government.