



Using social network analysis for a better description of animal health information flow in disease surveillance

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Pre-ISVEE workshop

Discussing the development and application of methods for effective surveillance in livestock population

August 6-8th, Durban, South Africa

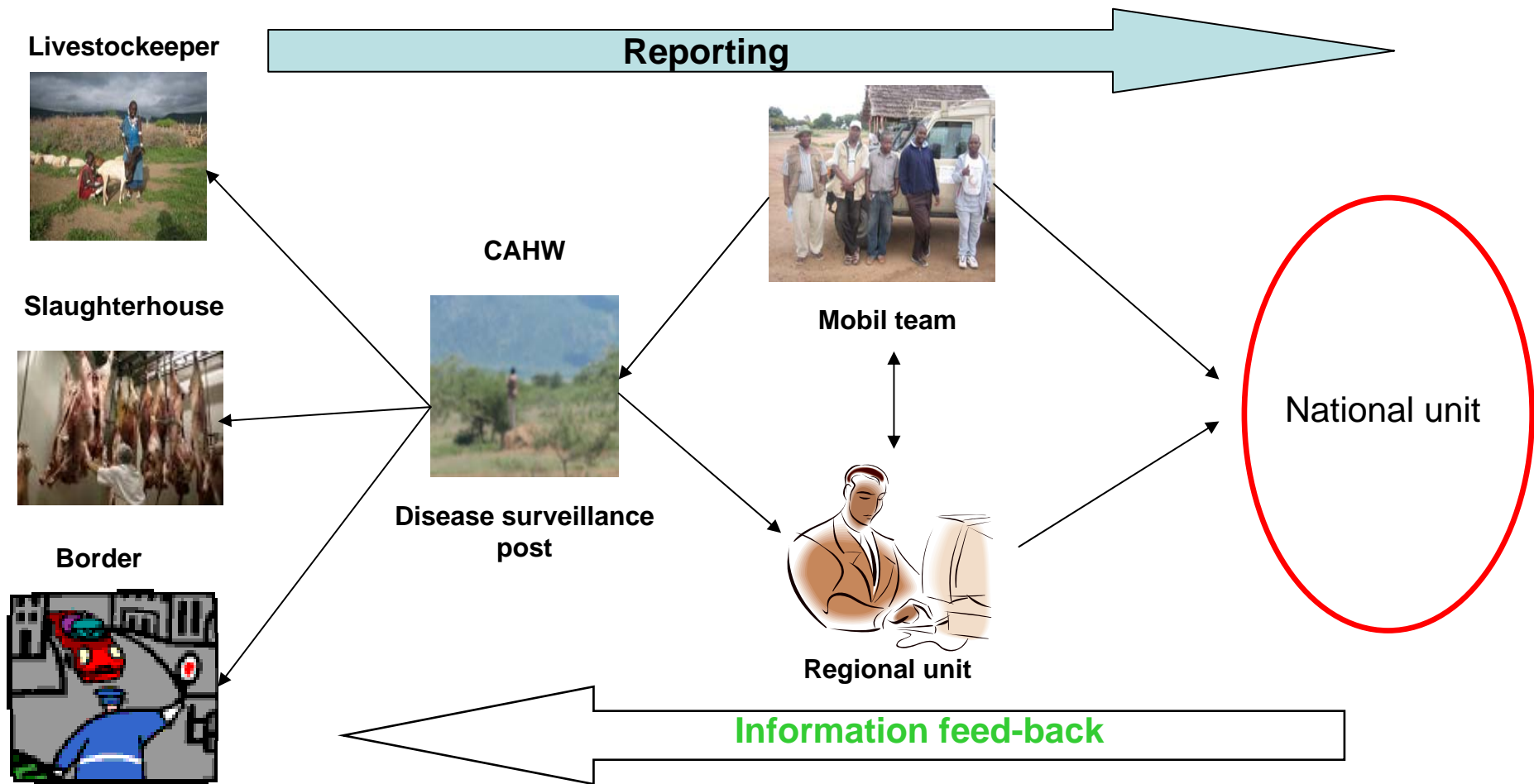
Objective

Describe pathways for animal health information flow in disease surveillance

Background

Disease surveillance & Disease surveillance network

Classic animal disease surveillance network



Activities

- Data collection
- Data transmission: reporting
- Data management and analysis
- Information feed-back

Weak points

- Human capacity and sensitization
- Financial resource

Definition

A set of persons and the **relationships** among them.

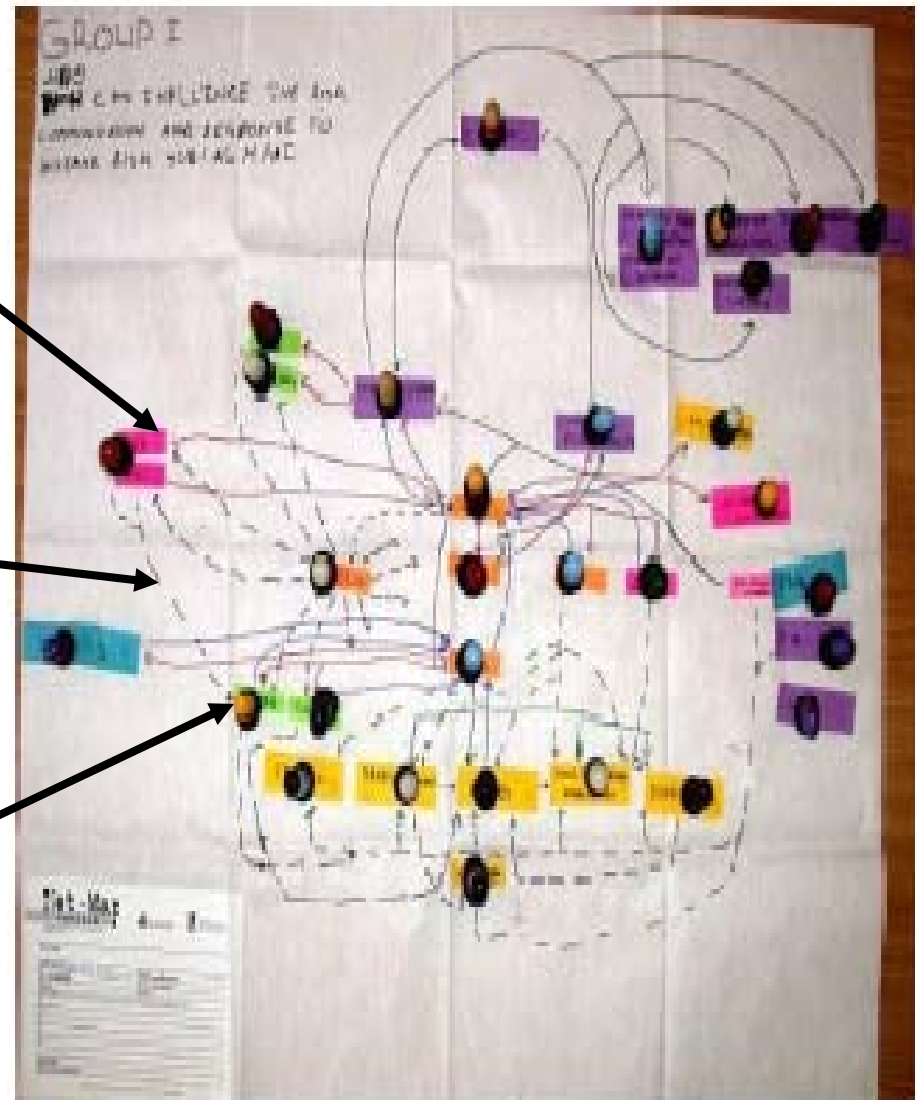
(Source: Network epidemiology: A handbook for survey design and data collection)

Objective

Describe alternative pathways for animal health information
in disease surveillance & disease surveillance network

Methodology

- Identify all the actors involve in disease surveillance network (according to their motivation, objective,...)
- Identify pathways used by the actors for data or information reporting (spontaneous or those which are organized)
- Identify the influence of each actor in the disease surveillance network

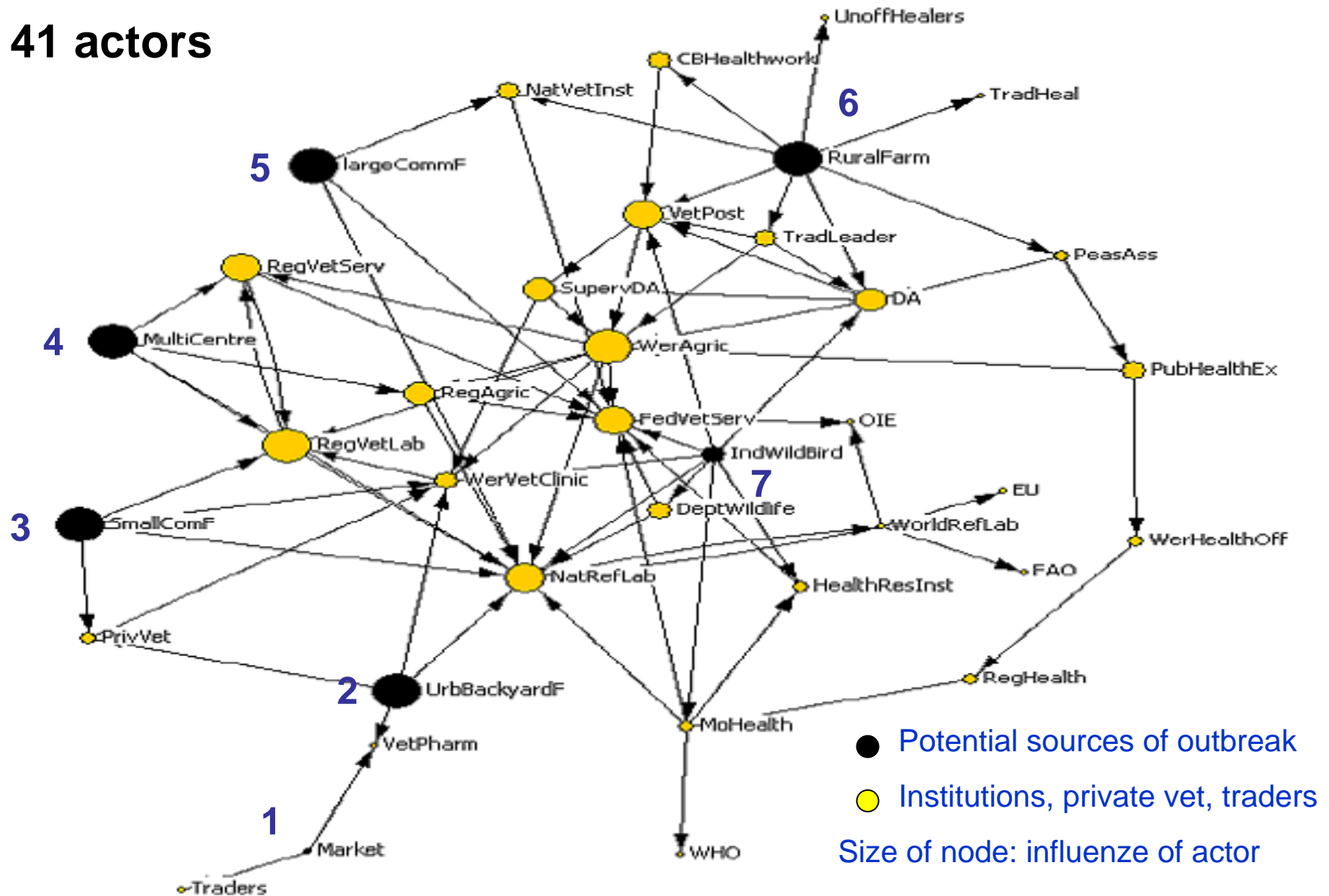


Example

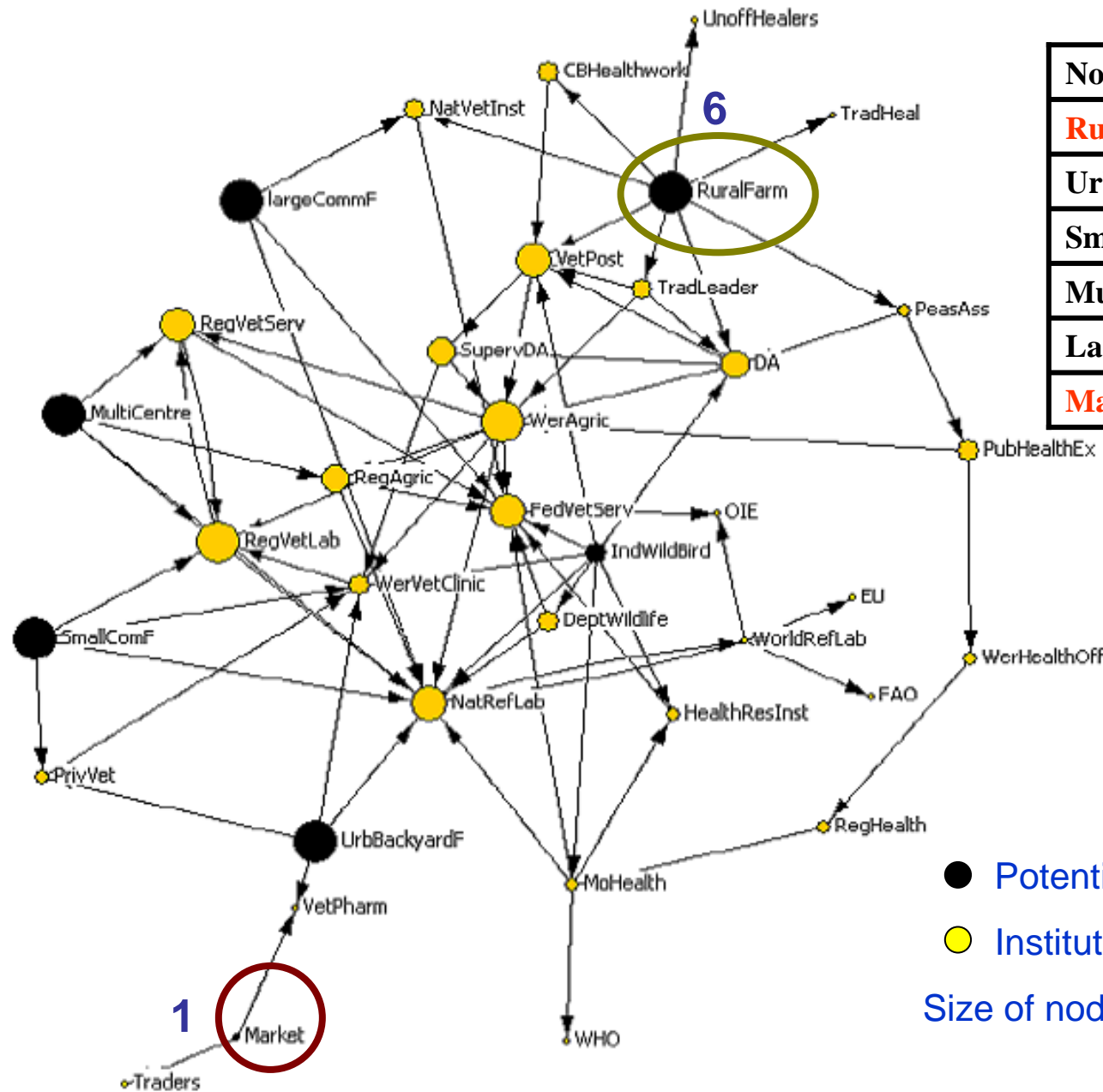
Who is involved and **how** do they communicate about suspect Highly Pathogenic Avian Influenza (HPAI H5N1) outbreak in Ethiopia?

Flow of information about HPAI H5N1 outbreak

41 actors



Flow of information about HPAI H5N1 outbreak



Degree centrality

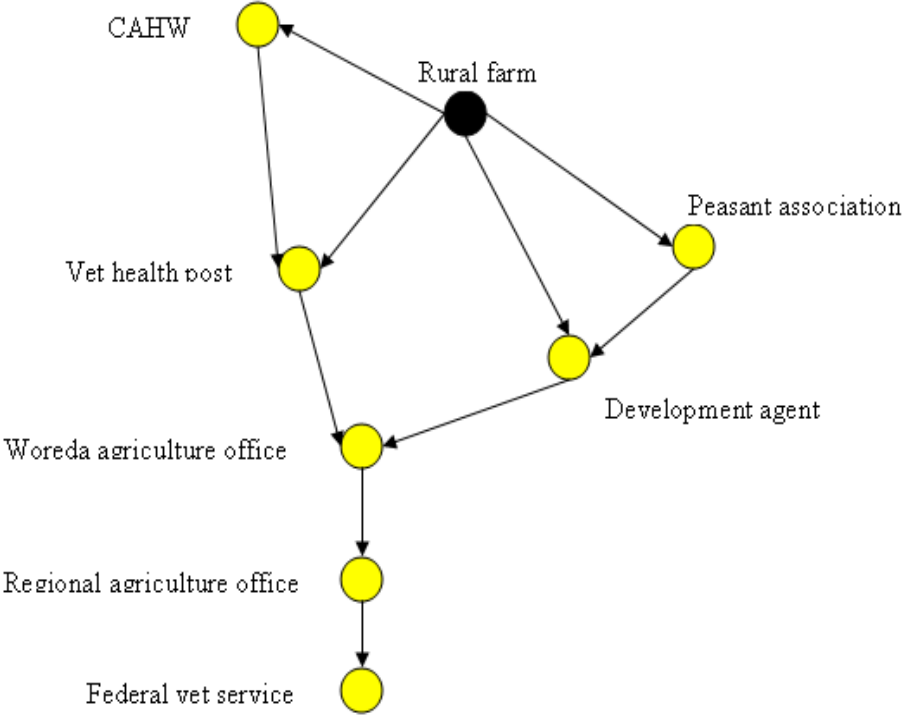
Node	Degree
Rural farm	8
Urban free range farm	4
Small commercial farm	4
Multi plication centre	4
Large commercial farm	3
Market	2

● Potential sources of outbreak

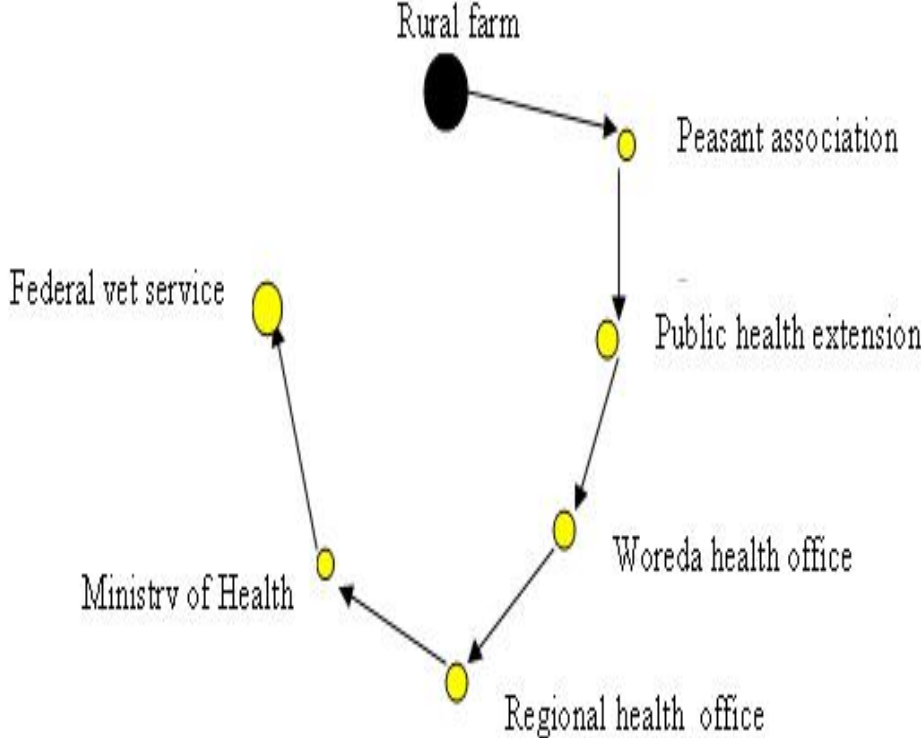
● Institutions, private vet, traders

Size of node: influence of actor

Formal pathway



Alternative pathway remote area

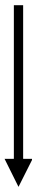


- Potential sources of outbreak
- Institutions
- Size of node: influence of actor

Conclusion

Schema of DS Network

- Lack of human capacity
- Lack of sensitization
- Lack of financial ressource



Current situation in many developing countries

Social network analysis

- A better description of pathways used by the stakeholders for animal health information flow
- Analysis of the role of each node of the network
- Choice among alternative disease surveillance network



Effective disease surveillance in livestock populations

Acknowledge

Clare Narrod, IFPRI, DFID Pro-poor HPAI risk reduction project

Thank you



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