

# REVASIA Research Program

Innovative methods to evaluate animal health surveillance systems in South East Asia



## What is evaluation?

- To appraise a system in the most objective way
- Main goal: improve the functioning of the system

→ decision-making tool

- **Within the system:**
  - Detection of the system weaknesses
  - Control the quality of information produced
  - Control the use of funding
- **Outside the system:**
  - Measure the capacity of the country to detect diseases under surveillance
  - Enable neighboring country to do risk analysis

### To take action

- Modification of surveillance protocol
- Organization of training sessions
- Revision of surveillance objectives

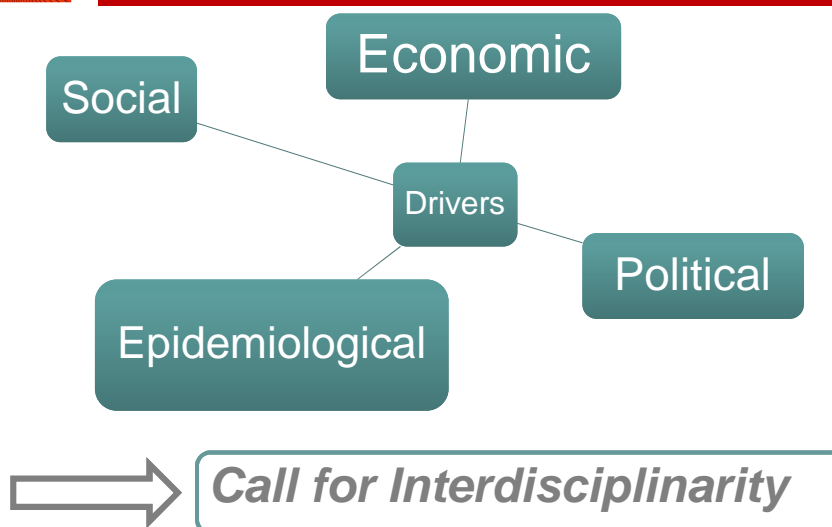


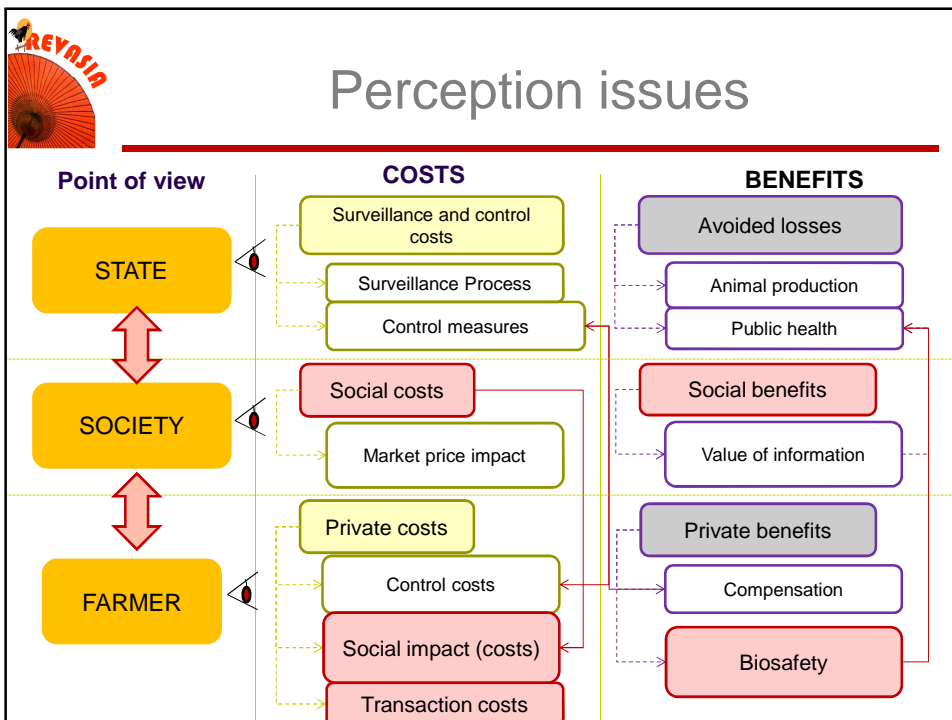
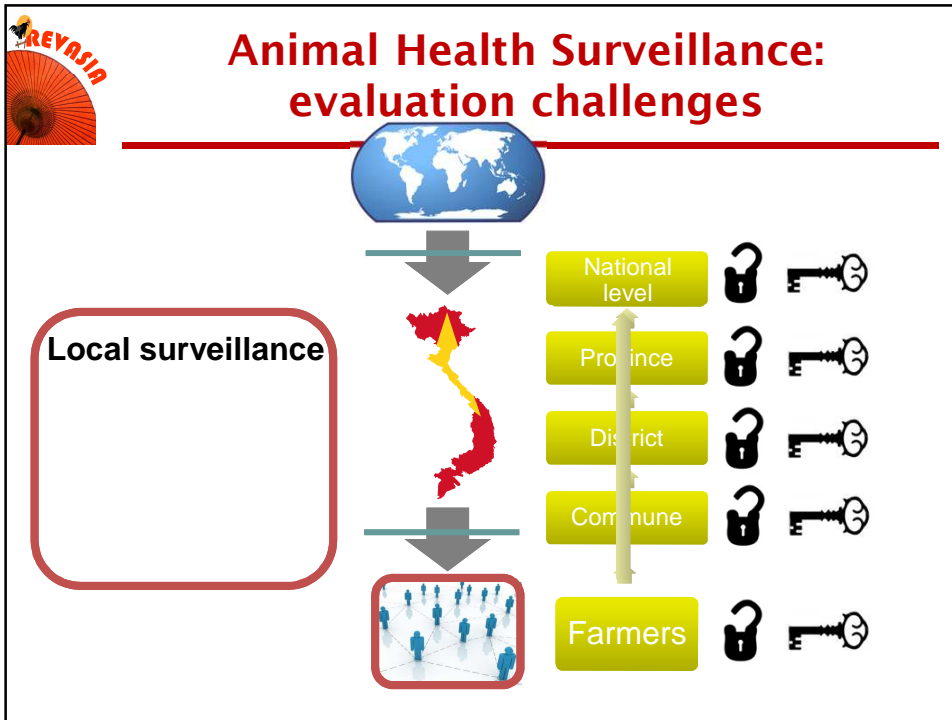
## SURVEILLANCE NETWORKS ASSESSMENT – RATIONALE

- **Ensure efficacy and efficiency**
  - Assess the operational efficacy of the network
    - Analysis of critical points: trouble shooting diagnosis
    - Proposals for improvement
  - Assess the adequacy between objectives and results
  - Best use of resources
- **Ensure quality of data generated**
  - Ensure trust in the sanitary situation: trade issues
  - Ensure efficacy and relevance of control measures/strategies
- **Internal vs External assessment**
  - Internal: performance indicators; long-term process (continue)
  - External expertise; transversal assessment (punctual)



## Animal Health Surveillance: evaluation challenges





# REVASIA framework



Research on tools for the evaluation  
of animal health surveillance  
systems  
(2009-2017)



## Research Questions

- How to optimise the efficiency of disease risk management strategies (surveillance and control)?
- Which priorities? **RELEVANCE, IMPACT**
  - Epidemiological situation; disease prioritisation
  - Disease economic impact
  - Participatory approaches

} *Pham TT Hoa presentation 2*
- What are the systems' performances? **EFFECTIVENESS**
  - Qualitative analysis: OASIS (SNATrop);;participatory approaches
  - Quantitative evaluation of performances: Capture-recapture ; Stochastic modeling; Mathematical modeling

} *M. Peyre presentation 1*
- Which constraints? **EFFICIENCY, SUSTAINABILITY**
  - Economic evaluation
  - Participatory approaches
  - Socio-economic studies

} *A. Delabouglise presentation 3*



## Research Questions

- **How to design efficient strategies?**

- Which protocols and how?
  - Value chain network analysis (Social network analysis)
  - Risk analysis
  - Pilot surveillance protocols (syndromic surveillance , SMS...)
  - Acceptability and perception studies

} *Dao D Tung presentation 4*

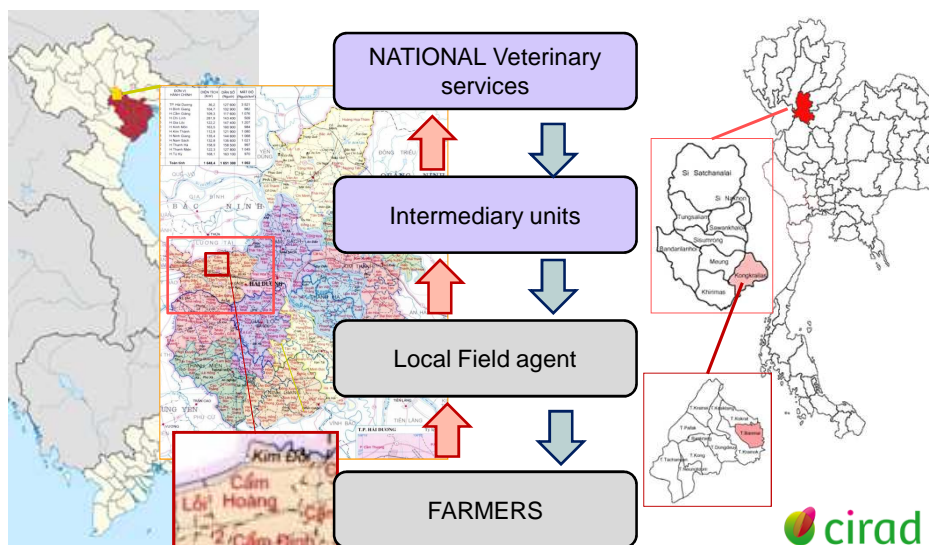
- How to address all actors' constraints and priorities?

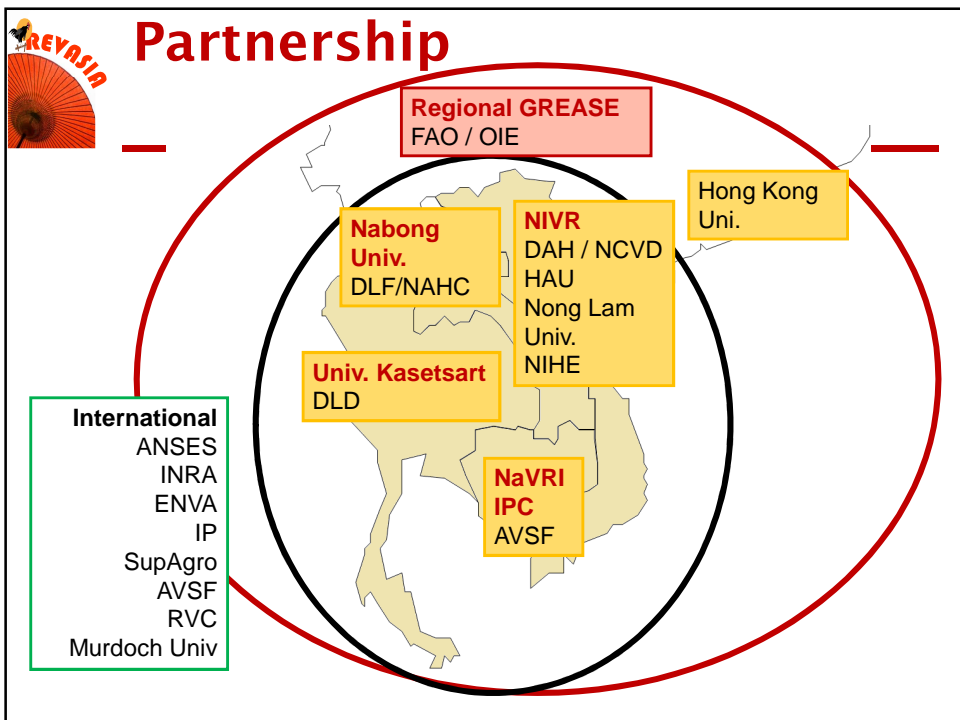
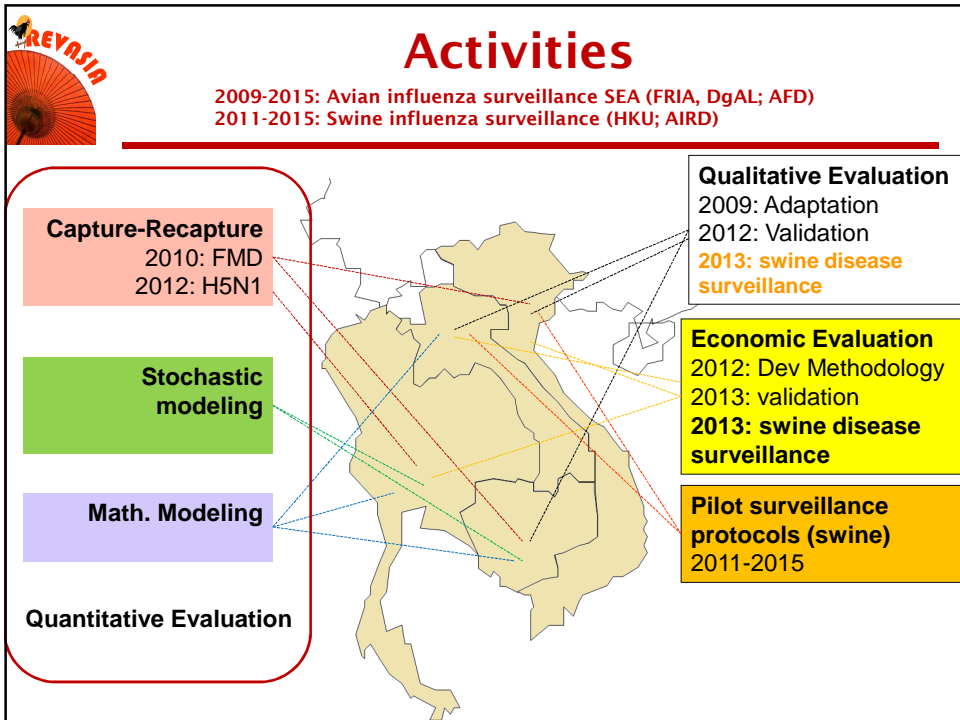
- Companion modelling from local to national
- (READI ComMod Pilot network)

} *M Peyre presentation 5*



## Multi level / Bottom up approach








# Publications

- Per review
  - 16 with GREASE partners
  - >6 in preparation
- Communications:
  - International Scientific conferences:
    - Option for the Control of Influenza VII (2013), AITVM (2013); ISVEE (2012, 2013); PENAPH (2012), STVM (2012), ICAHS (2011; 2014); One Health (2011; 2014) ...
  - CIRAD news
  - Perspective n°23

<http://revasia.cirad.fr/>





# Ongoing activities –Vietnam

## Development of socio-economic evaluation methods

- Socio-economic evaluation of swine disease surveillance system in Vietnam (PhD Thi Thanh Pham Hoa, CIRAD) (2013-2016)
- Evaluation of social costs and benefits of avian influenza surveillance in Vietnam and Thailand (PhD Alexis Delabouglise, CIRAD) (2011-2015)
- Evaluation of farmers' perception of FMD vaccination in South Vietnam (PhD, Trung Dinh Bao, Nong Lam Uni.) (2013-2016)

## Innovative approaches for surveillance designs

- Inter-species transmission risks in commercial pig production in Vietnam (Mphil Dao Duy Tung, NIVR) (2015-2016)
- Innovative approach for zoonotic risk surveillance in Vietnam: the case study of swine influenza (PhD Eugénie Baudon, CIRAD/HKU) (2011-2015)
- Avian influenza surveillance system at the interface of veterinary and public health: how to ensure a One Health approach (READI network ) (2014-2016)

## Evaluation of REVASIA research program expected impacts (2014-2016)