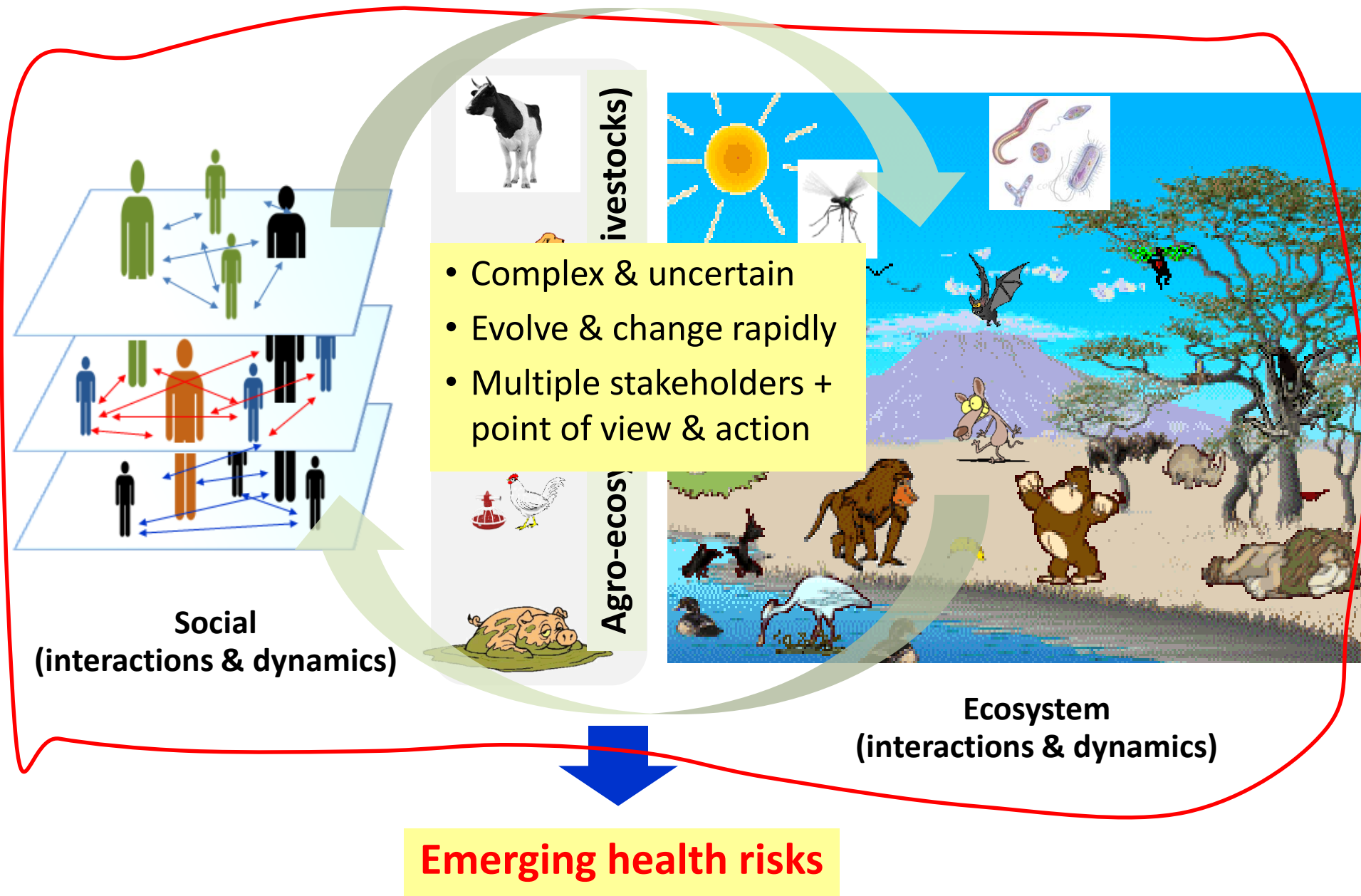


# Importance of parasitic foodborne diseases in rural areas of southern Laos: A long-term case study using an integrated approach

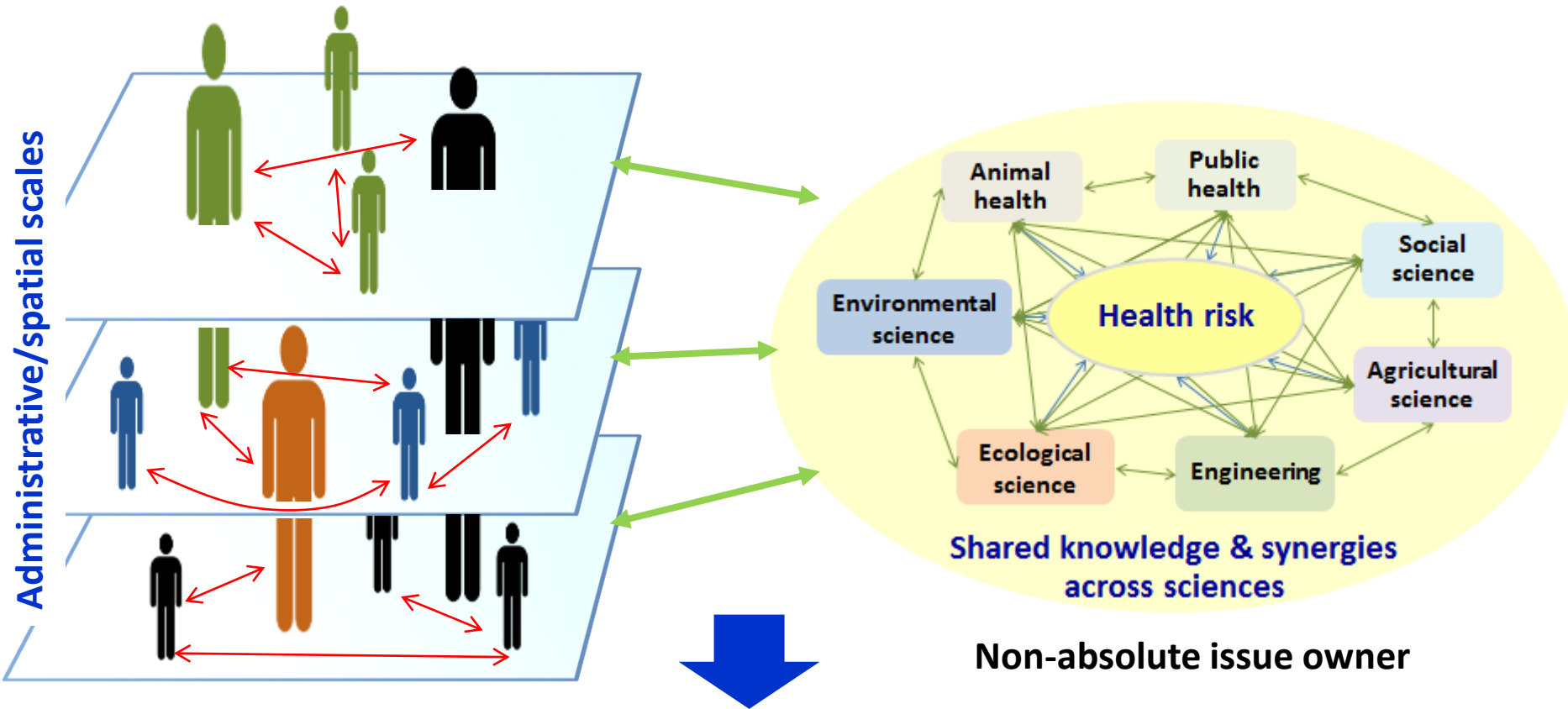
Vannaphone Putthana, Panomsak Promburom, Thipphakone Lacksivy, Dethaloun Meunsen, Amphone Keosengthong, Garance Danner, Khao Keonam, Palamy Changleuxai, Nalita Adsanychanh, Daosavanh Sanamxay, Phongsamouth Suthammavong, Khampasong Ninnasopha, Aurélie Binot, Stephane Herder, Fred Unger



# Social ecological system & OneHealth



# Trandisciplinary and cross-sectorial collaboration platform



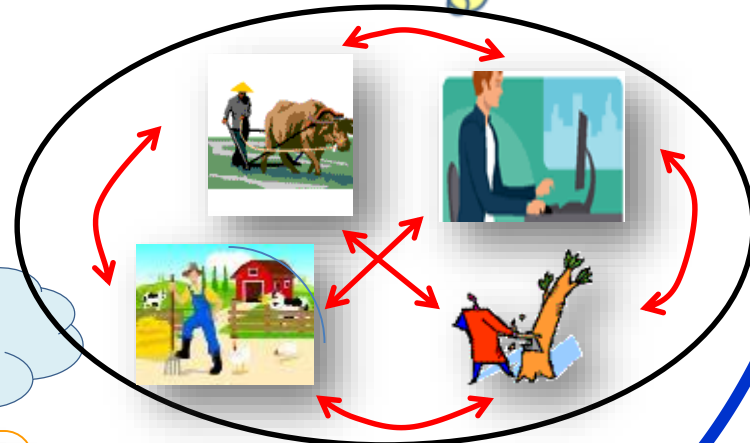
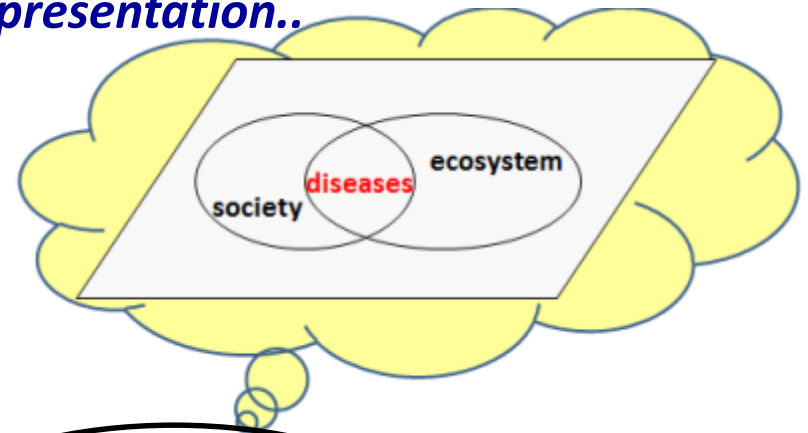
Mutual learning & understanding, support, networking, capacity building and collective action for better management.

*.. a common representation..*

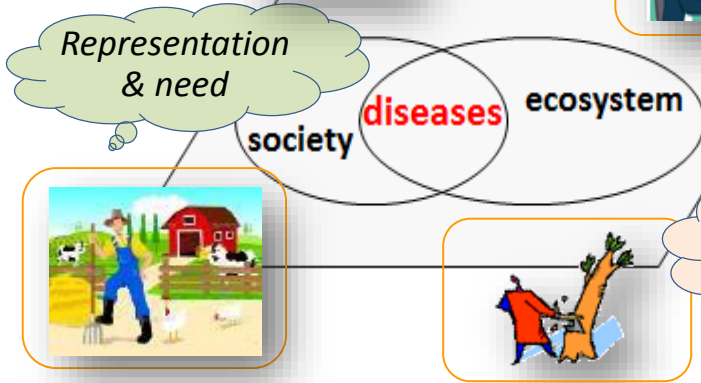
## Companion modeling approach

*..to co-construct..*

*From individuals' representations...*



**Exchanging point of view & knowledge**



*..perceive, aware modify individual one to facilitate collective action ?*

**Changes / Outcomes**

# Parasitic food-borne diseases (PFBD) in Laos

## “Integrated OH approach” into → “practice”

- PFBD are expected to be widely distributed in Laos.
- PFBD can significant impact on human health, livelihood and economy.
- Lack of detailed information and evidences.



## Objectives:

- Assess PFBD distribution in southern Laos.
- Understand risk-related perception & practices.
- Establish a cross-sectorial collaboration platform to promote feasible prevention & control.



# In-depth assessment of PFBD

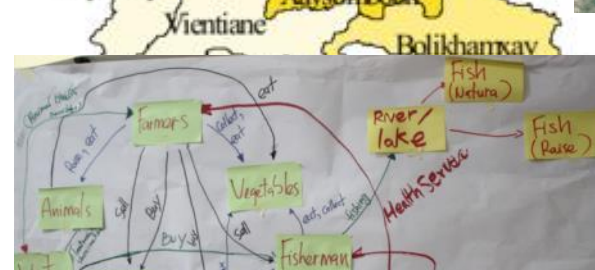
## Issue contextualization

- Interdisciplinary team (Vet, Med, Soc, Env, Agri, modeling)
- Co-construct better understanding



## Literature review

- Trichinella



## PRA/PE: 3

- Various t

Parasites	Human %	Animal %
Trichinellosis	4-59	2.1-14.4
Taeniasis/cysticercoses	0.5-46.7	0.6-4.6
<i>Opisthorchis viverrini</i>	10.9-84.6	



## On-farm survey (1 province, Savannakhet)

- Serological survey (Trichinella in pigs using ELISA)
- Questionnaire, observations and likert scales



# PRA/PE: Topics of the focus group discussion

- Livelihoods context and common issue of concern
- Social and cultural behavior/practices related to the PFBD
- Ecological and livelihood linkages
- General problems of the community
- Health issue/problem of human and animal
- Perception, knowledge, practice related to the PFBD

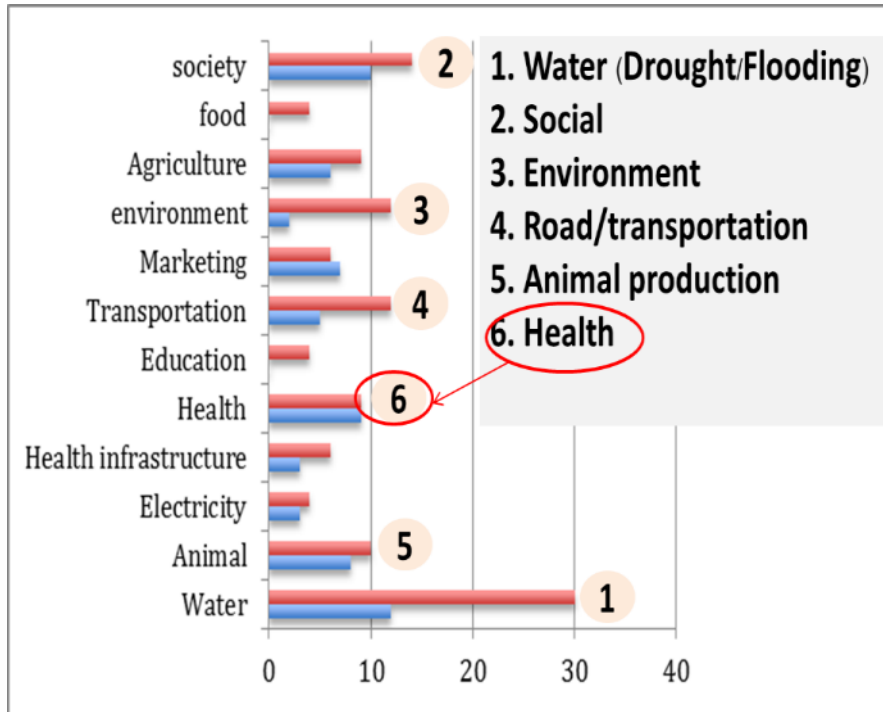
Activities	1	2	3	4	5	6	7	8	9	10	11	12
Rice												
Cash crops												
Home garden												
Animal raising												
fishing												
Off-farm waging												
Handicrafts												
Wedding												
Cultural events												



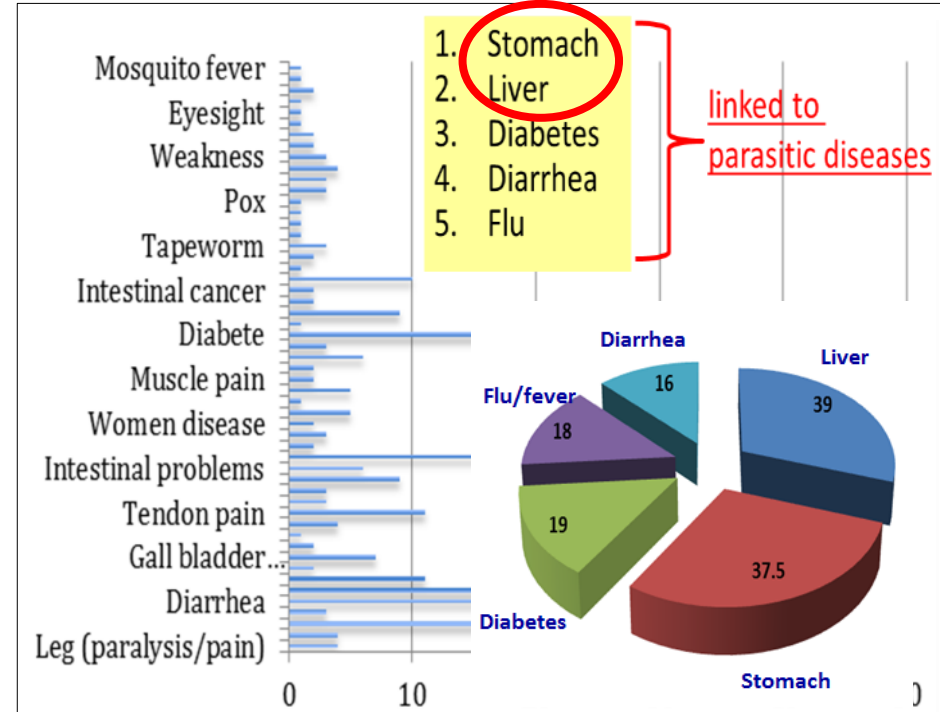
Slaughter animals

# PE/PRA → comprehensive info & knowledge gained

## General issue

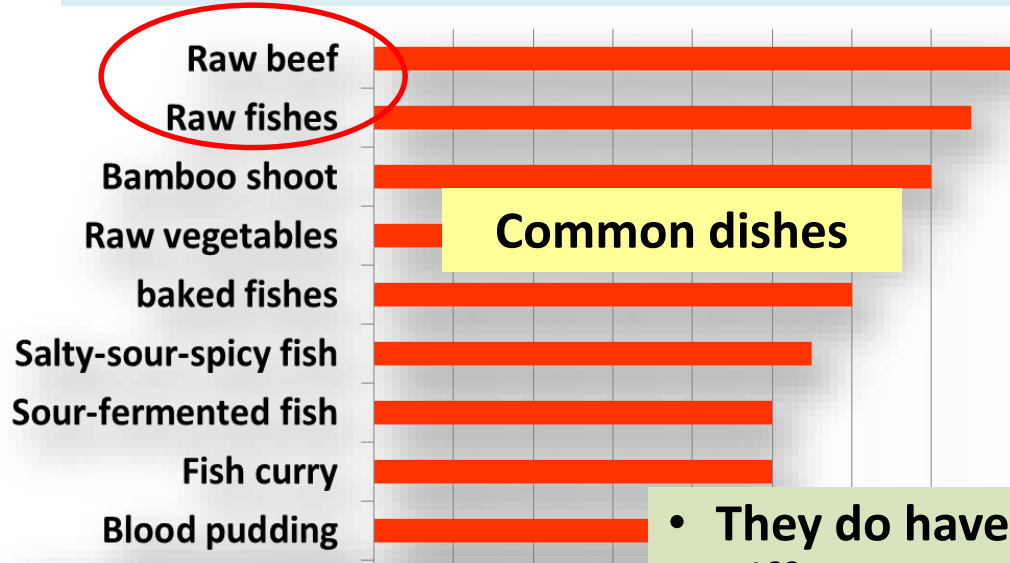


## Health issue





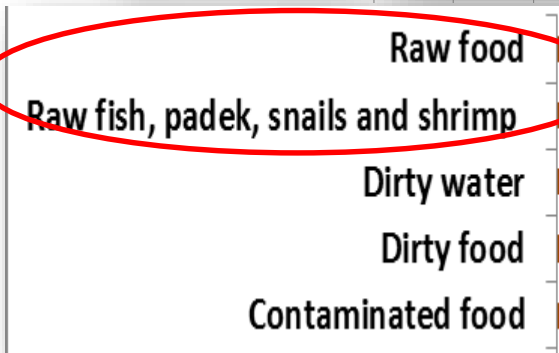
# Perception, knowledge and practice



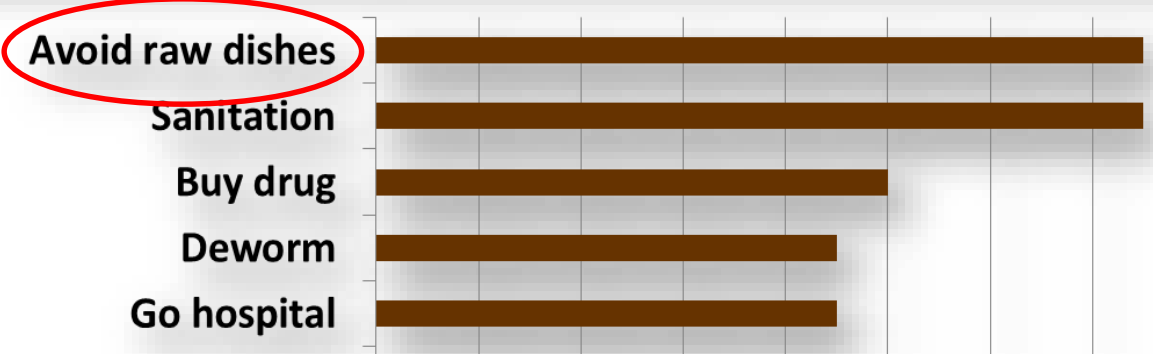
**Common dishes**



- They do have knowledge, but still take risk.
- Different among the respondents.
- Teacher have better knowledge.
- Paravet usually know worms but not precisely.



**Causes of the PFBD**



**Prevention & control**

# PRA/PE: Other risk practices (Observation)

- Open defecation
- Waste management
- Free roaming
- Dead animals management
- Slaughtering at unclean places

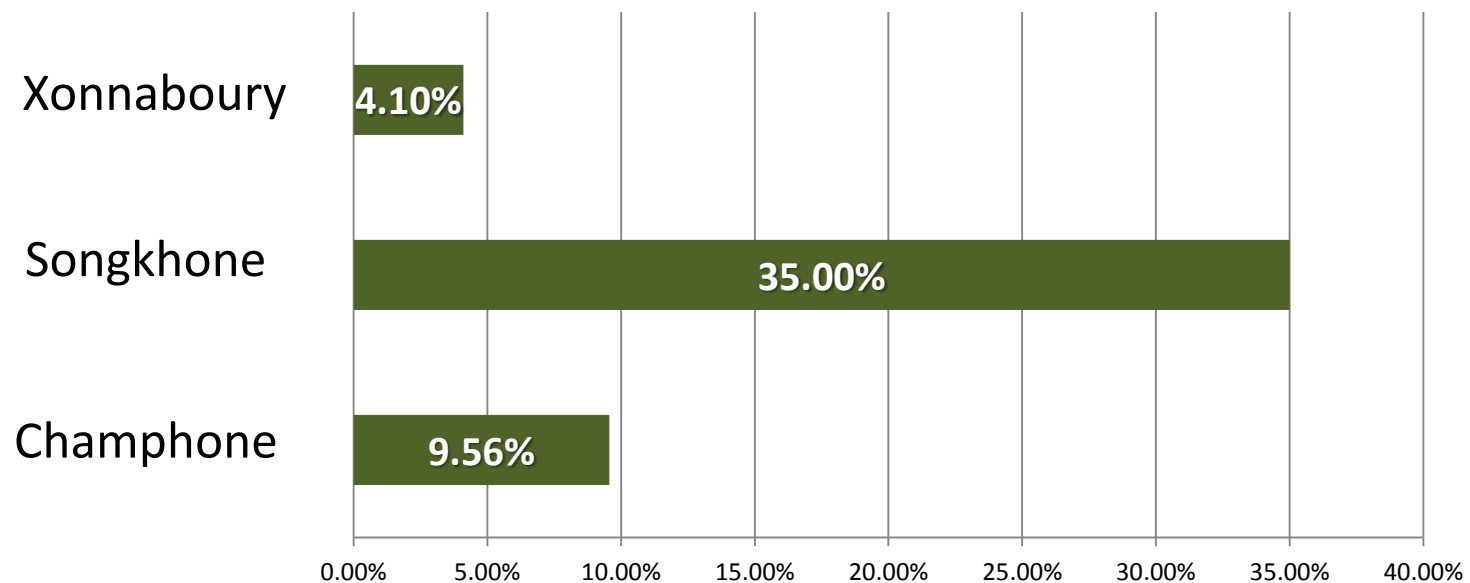


## PRA/PE: Summary

- Health and PFBD are low-ranked.
- PFBD could be linked to diverse quoted symptoms.
- Limited knowledge / wrong perception.
- PFBD-related risk practices.

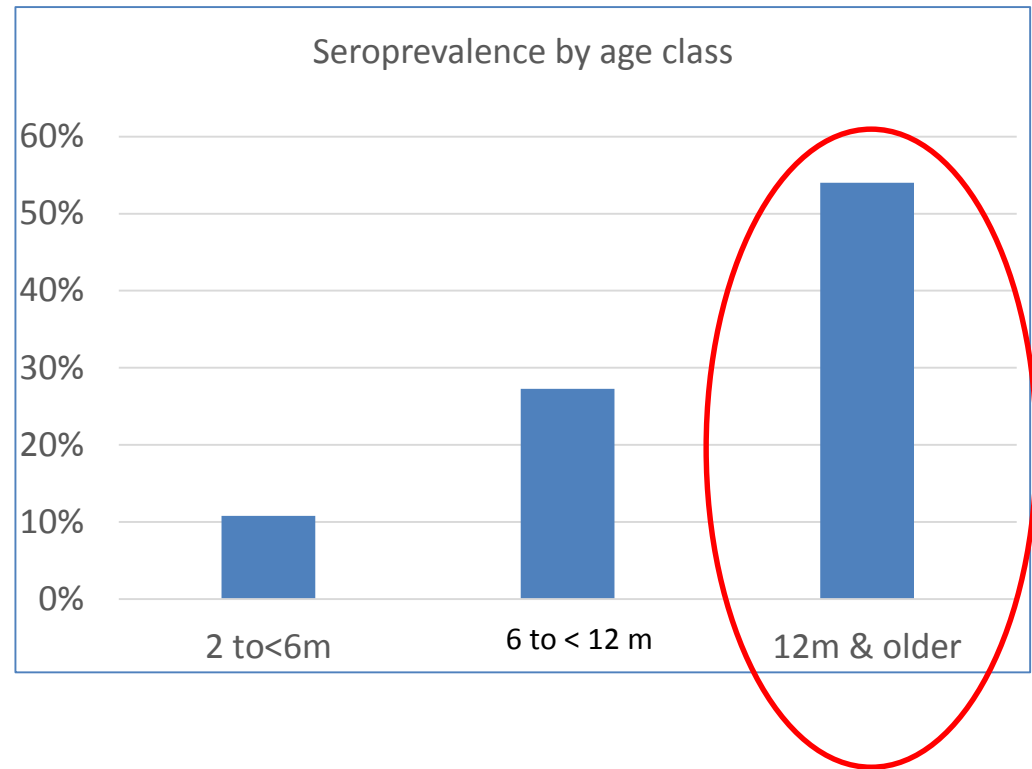
# Serological Results

- 418 samples from 181 households were collected in 19 villages across 3 districts of Savannakhet.
- Overall serological prevalence for *Trichinella* in pigs 17.7% (74/418)
- Significant difference between districts



## Seropositivity and age

Highest prevalence in pigs  
1yr or older: 54% (27/50)



## Seropositivity and housing



Pen: 16.7% (39/234)



## Other selected results

**Zoonotic knowledge:** 14.4%, 26 of 181 people heard about zoonotic diseases, but further details were usually not known

Associated diseases stated (out of 26 repondent):

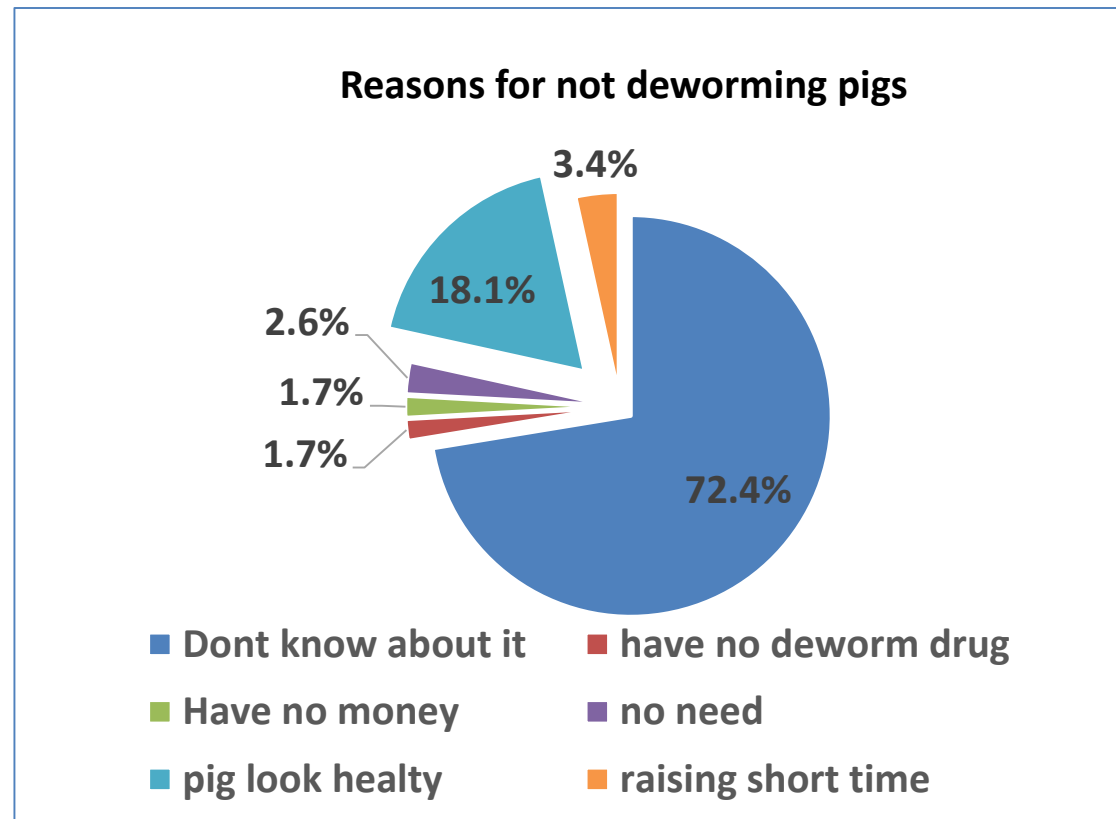
- Bird flu (4/26), Liver fluke/liver disease (3/26), Rabies (1/26), Denghi (1/26)

### Use of dewormer in pigs

6.1% (11/181 farmers)

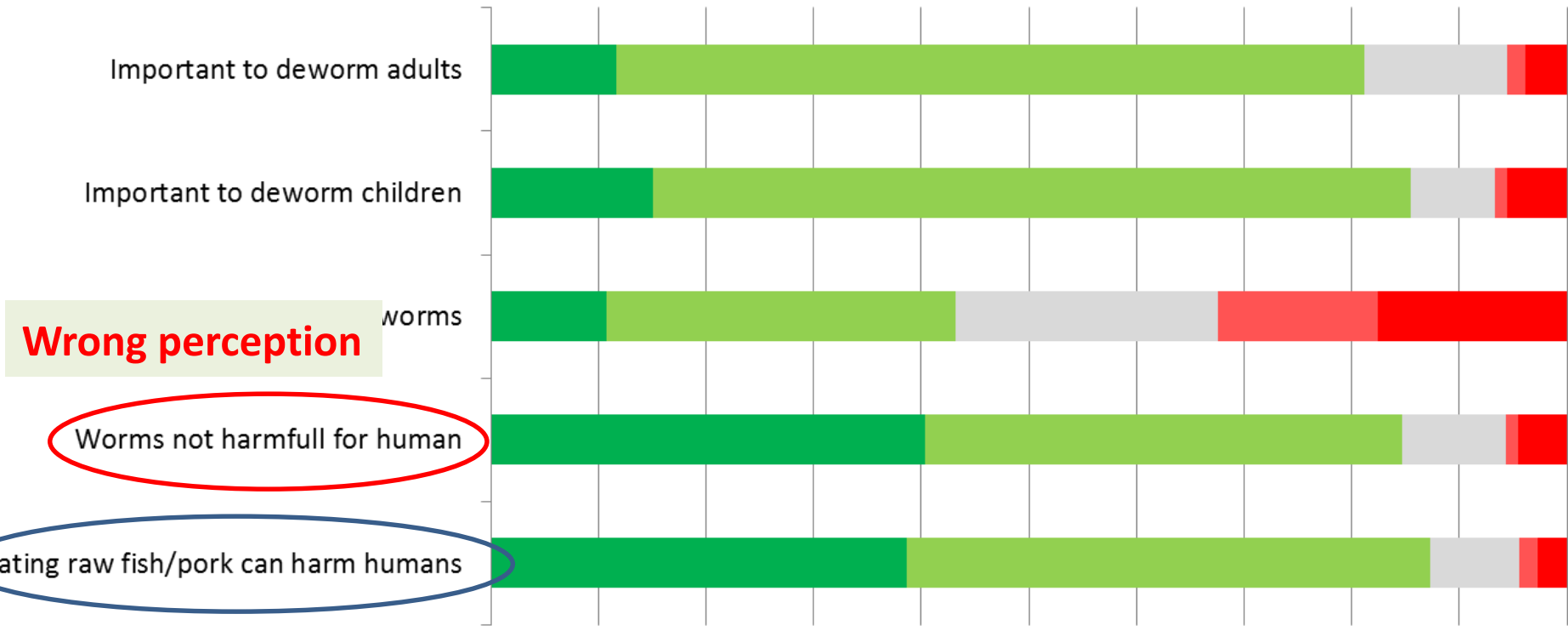
### Reason for not using:

- Dont know about is (72.4%)
- No need as pigs look healthy (18.1%)



# Villagers perception related to deworming and raw fish/pork consumption (using Likert scale)

Strongly agree    agree    neutral    disagree    Strongly disagree



**Wrong perception**

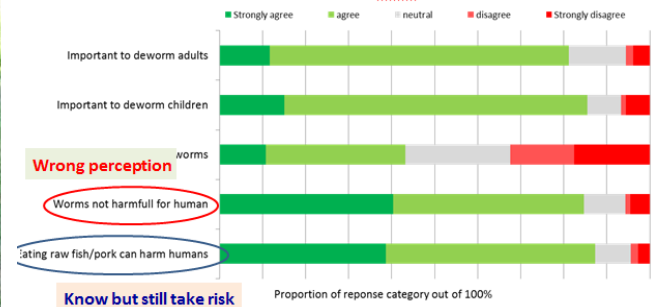
Worms not harmful for human

Eating raw fish/pork can harm humans

**Perceived correctly, (but still take risk)** response category out of 100%

# Synthesis of results: Knowledge on PFBD (ongoing)

PRA	Questionnaire	
	Interview question	Likert scale
<p>- Very limited knowledge on cause and prevention</p> <p>- Worms are common for vilagers but not known as health issue</p>	<p>- <b>Very limited knowledge on cause and prevention</b></p> <p>- <b>Only 1.5%, link raw pork consumption to PFBD</b></p>	<p>Perception that worms are not harmful for humans (85% agreement)</p>



# Cross-sectoral platform





# Steering committee

## Steering committee establishment

- Representatives from 6 ministries, faculties, and local governors.
- Informed/updated on the project approach and progress made.
- Agreed on duties and commitment to advise, interface with policy level.
- Extend one health effort network.



# Technical working group (TWG)



- Ministries: Agriculture & Forestry, Defense, Public health, Natural Resource & Env., Information, Culture & Tourism, Education & Sport, U. of Health Science, 3 Faculties (Env, Soc, Agri)
- Well informed and agree to the project approach & process.
- Committed to provide technical advise and support.



# Feedback meeting @ Khammoune and Savannakhet 24-26 November 2016

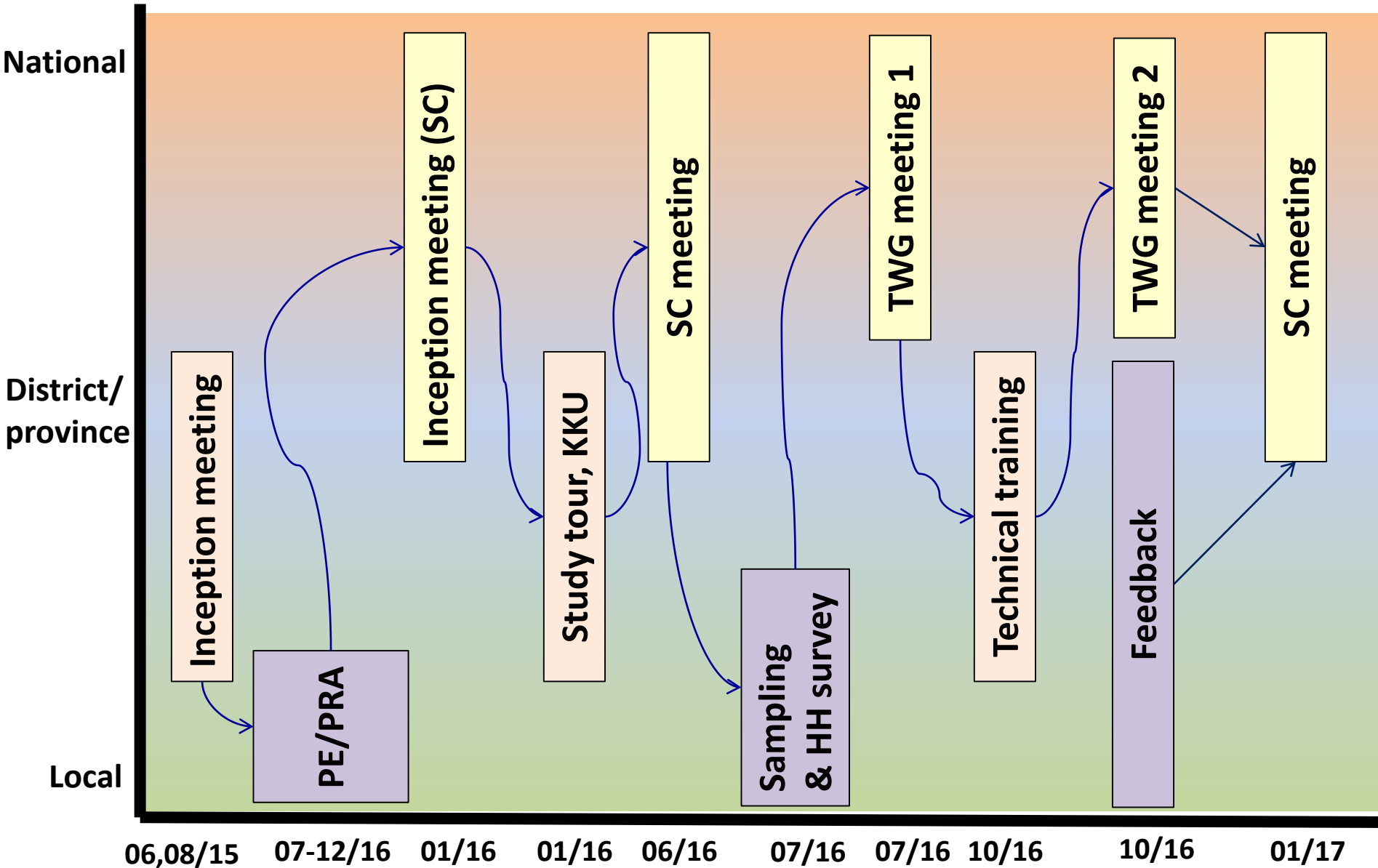


- 18 villages from 2 provinces
  - 3 representatives from the TWG
  - 15 representatives from the provincial sectors.
- Knowledge verification (get feedback from the stakeholders)
  - Exchange and improve knowledge.
  - Inform the research direction and activity plan.
  - Build trust, keep connection and networking with the stakeholders.



# Inter-sectoral collaboration

Administrative level



# Summary

- The project has been establishing and building a set of capital essential for the OH issue in Laos (and in others).
  - Interdisciplinary research team, transdisciplinary efforts
  - Valid scientific knowledge for evidence based recommendations
  - Capacity building (research team, local partners, SC and TWG)
  - Cross-sectoral collaboration platform (SC and TWG established and linked to the local offices)
- An innovation of developing and implementing integrated methodological framework and cross-sectoral collaboration platform for OH issue

# Ways forward

1. Consolidate the finding and provide concrete evidence to raise awareness and stimulate the collaborative efforts.
2. Co-design & develop the communication & intervention
  - *Technical training to the local staffs.*
  - *Co-design & develop communication tool (school, locals).*
  - *Designate a local cross ministerial working group.*
3. Pilot info & knowledge dissemination and collective management.
4. Proposed to the SC and conveyed to policy maker.
5. Co-develop a practical cross-sectoral platform guideline to guarantee the continuation of the OH effort.
6. M & E on the outcomes to broaden the communication and community of practice.



Issue?



Co-construct a common understanding

- System & holistic approach.
- Participative & adaptive manner.
- Co-learning by doing.
- Interdisciplinary team
- Trust and partnership

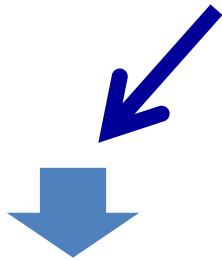


Concrete evidence

- PRA/PE
- Sero-sampling



SC



Agree and propose future improvements



"We need changes"

- What changes? how?
- Who changes? How?
- How to sustain?



TWG



# Challenges

- How to scale-out such integrated approach & practice?
- How to ensure long-term sustainable outcome and impact?
- How to engage target stakeholders involved in the processes?

**Thank you very much!**

ຂອບໃຈຫຼາຍໆເດີ

