

# Animal movement study in Myanmar and Lao PDR



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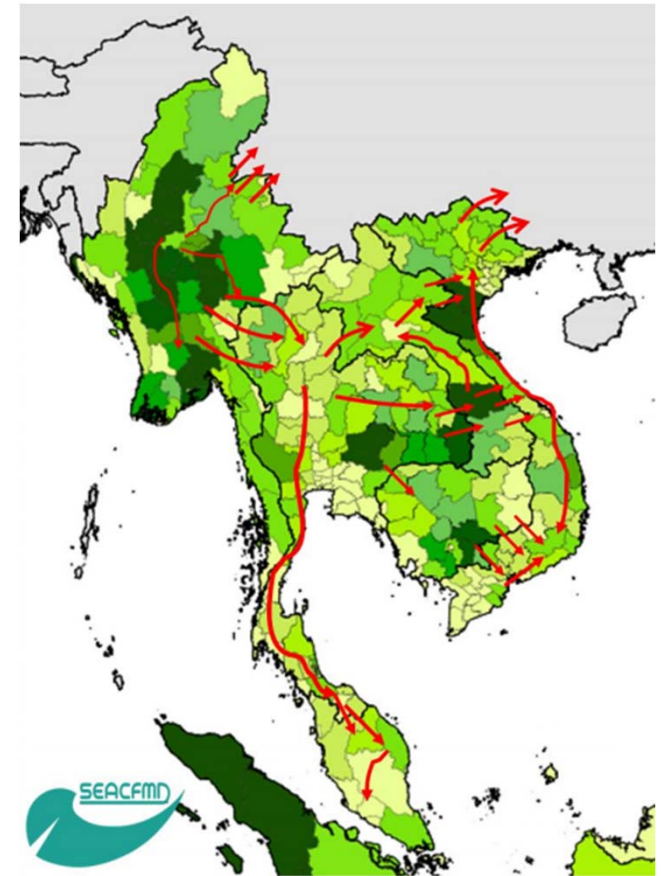
# Background

Animal movement/trade is important risk factor

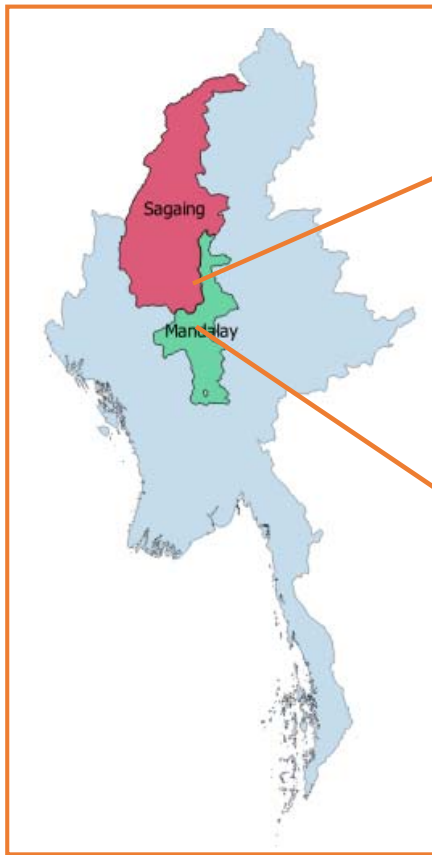
- Open borders
- Movement dictated by supply-demand of marketplace
- Risk of FMD incursion and outbreak
- Lack of quantitative information on movement of livestock

Need better understanding of;

- Contact pattern of livestock between village/ township/ district
- Frequency, distance and direction
- Level of FMD Knowledge & awareness of villager and trader



# Study area (Myanmar and Lao PDR)



30 Townships  
11 Sagaing, 13 Mandalay



Xiangkhouang

Savannakhet

Champasak



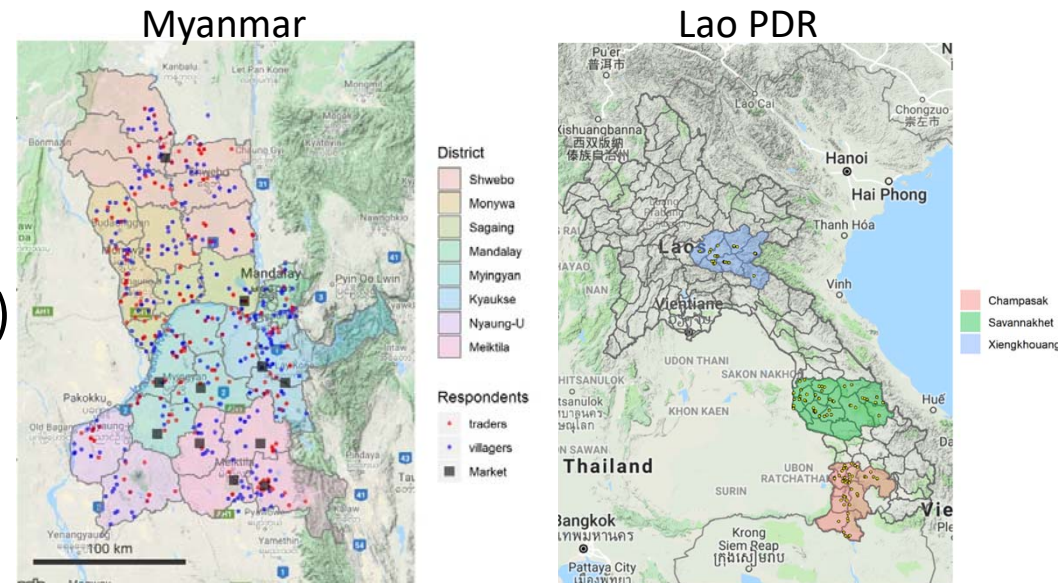
# Methods

- Face-to-face/phone interview
- Two separate questionnaire (Villagers & traders)

Random selection from official list

Survey	Myanmar	Lao PDR
Villager	380	195
Trader	315	169

- Questionnaire asking about:
  - Movements (trade and grazing/fattening)
    - Where from? Where to? How often?
    - Distance and direction
  - Animals
    - species, number, purpose
  - FMD knowledge and awareness

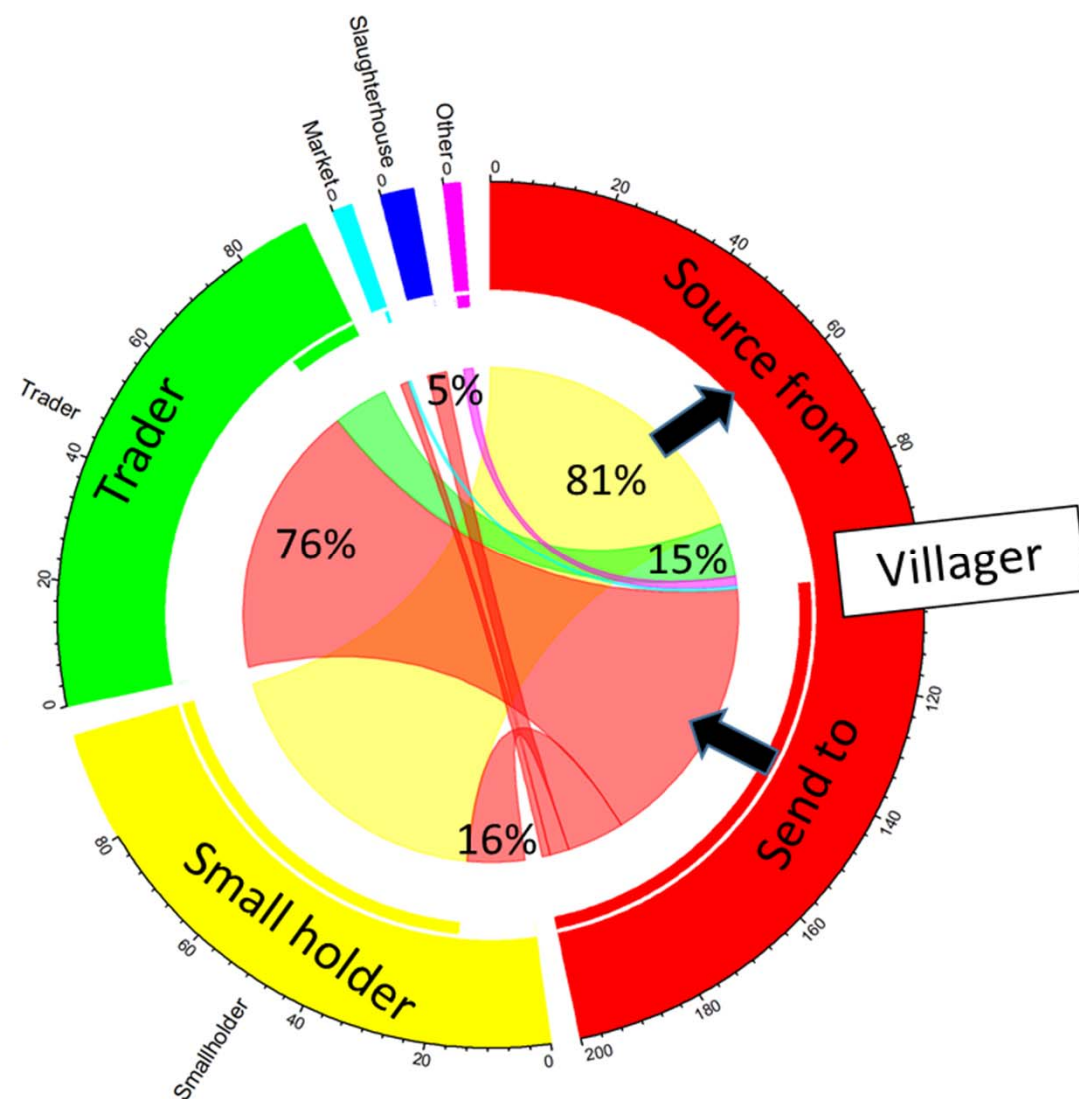


Face-to-face interview

# Village Livestock flow

As a percentage of total animals  
villagers bring in/ send out,

Type	Myanmar		Lao PDR	
	Source from (in)	Send to (out)	Source from (in)	Send to (out)
Small holder	68%	40%	81%	16%
Trader	18%	45%	15%	76%
Market	11%	11%	1%	2%
Slaughterhouse	-	3%	-	5%
Large holder/other	2%	1%	3%	1%



# Grazing/ fattening movement by smallholders

## Myanmar

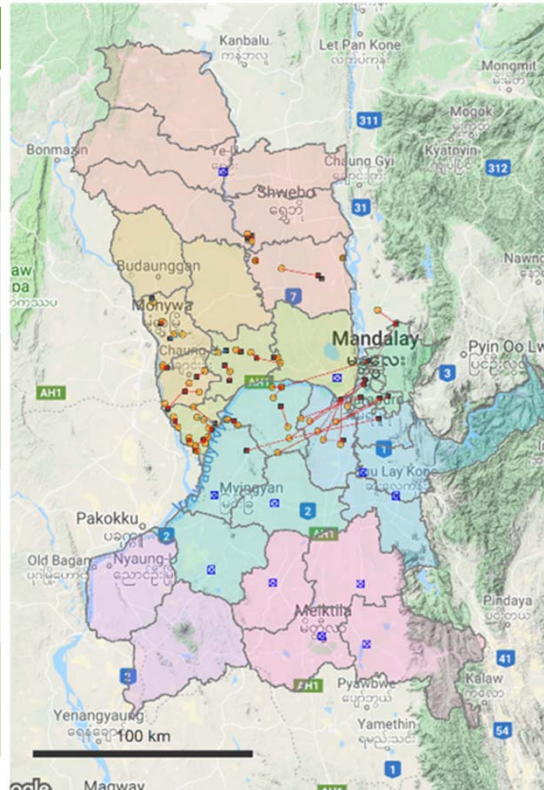
12% (in) and 5% (out)  
village

Mainly beef/draft cattle

Clustered in the central  
area

Median distance:  
3 km Inward  
6 km Outward

hot and dry season



## Lao PDR

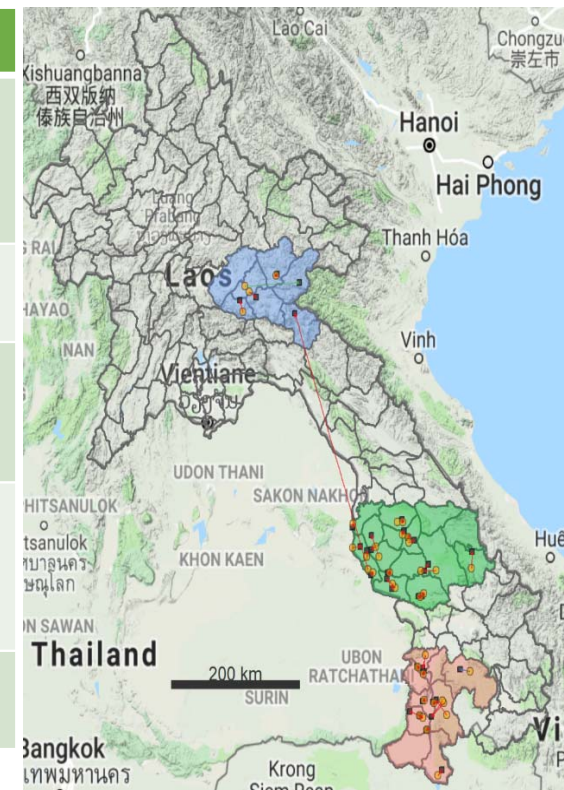
23% (in) and 16% (out)  
village

Mainly beef cattle

~95% within province

Median distance:  
6 km Inward  
8 km Outward

Avoid rice planting season



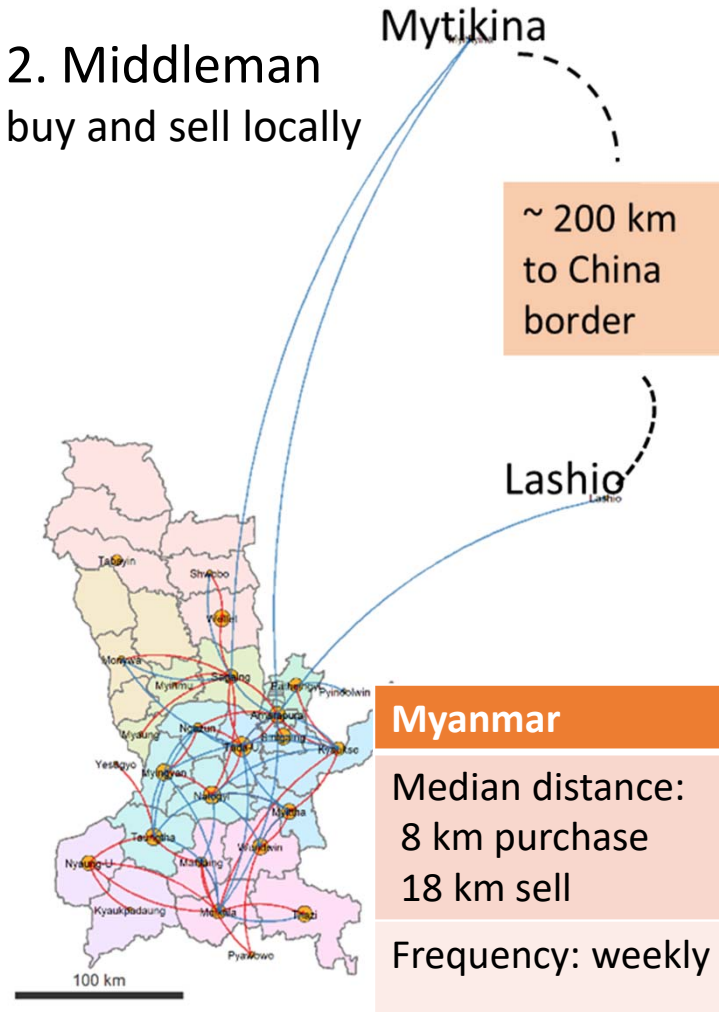


# Trader movement (Myanmar)

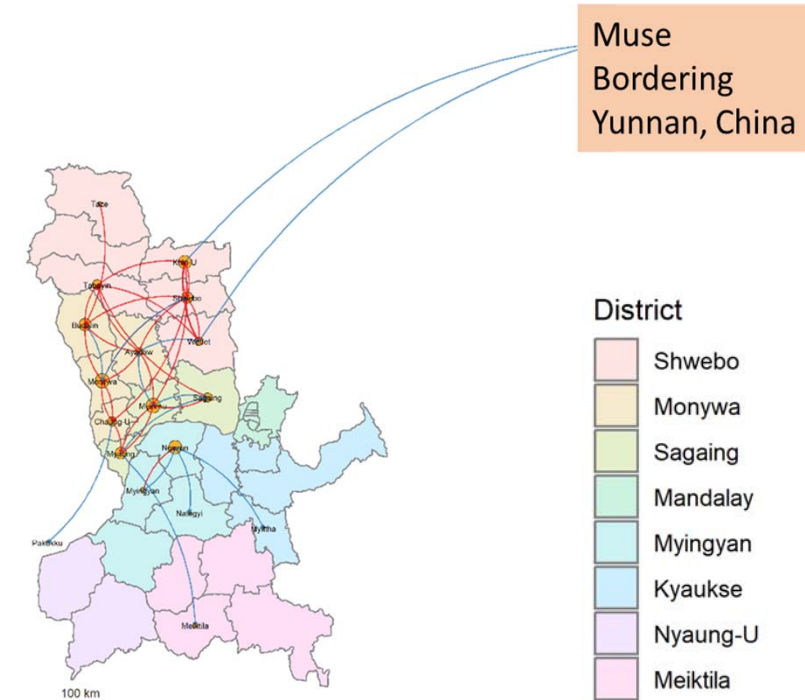
1. Slaughterer  
buy and process locally



2. Middleman  
buy and sell locally



3. Exporter  
Buy local and send abroad



Direction

— Purchase  
— Sales

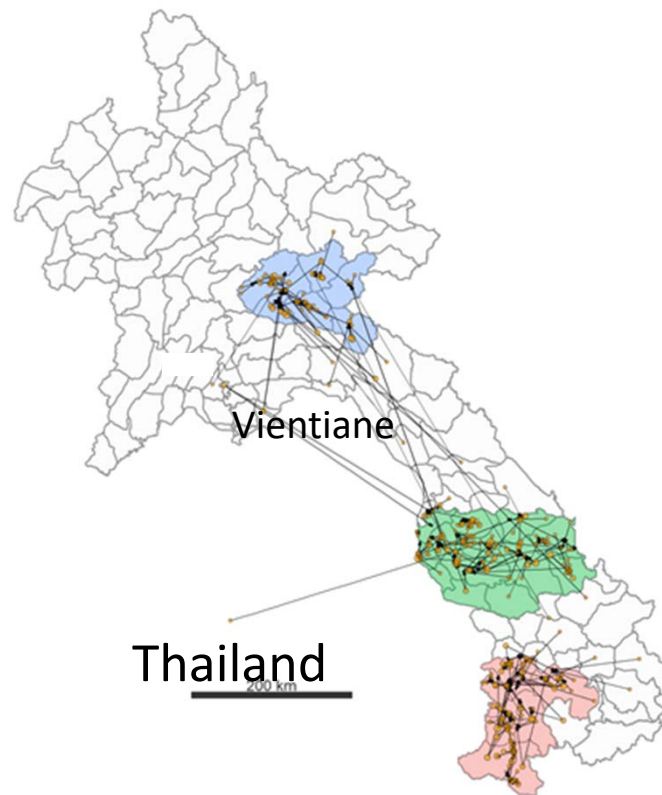
Muse  
Bordering  
Yunnan, China

District

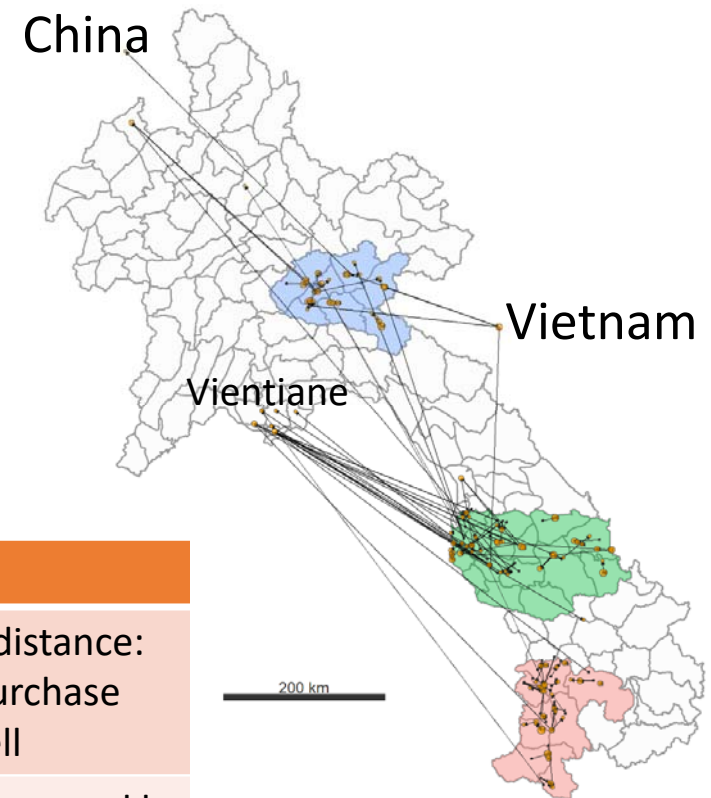
Shwebo  
Monywa  
Sagaing  
Mandalay  
Myingyan  
Kyaukse  
Nyaung-U  
Meiktila

# Trader movement (Lao PDR)

Purchase



Sell



**Lao PDR**

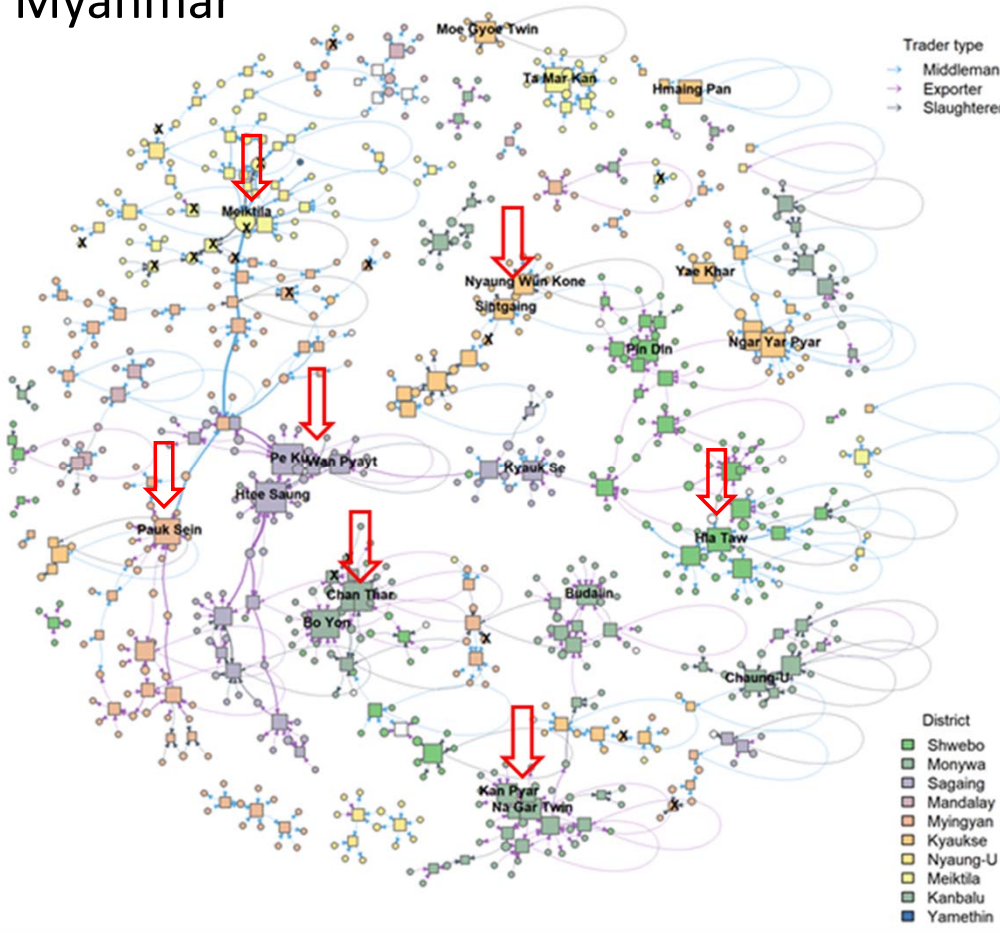
Median distance:  
30 km purchase  
20 km sell

Frequency: weekly

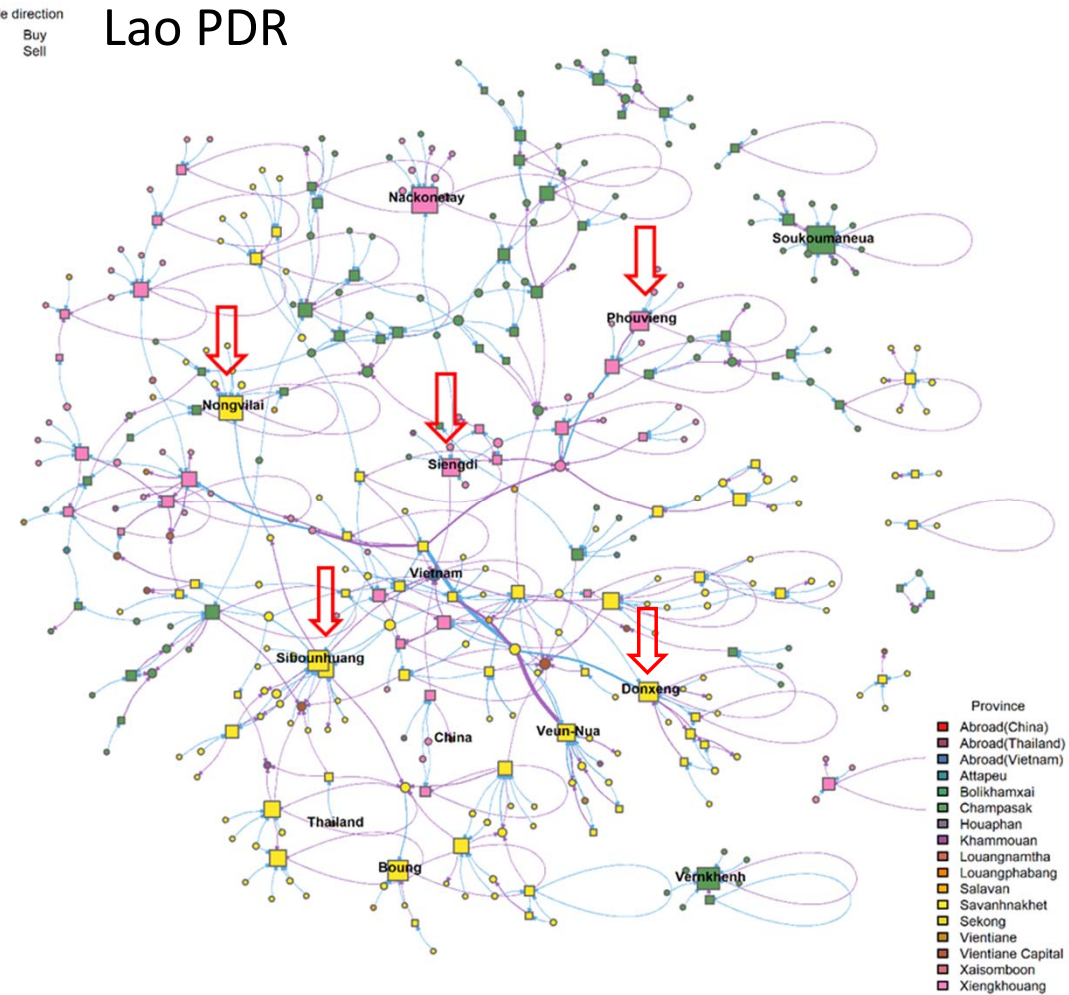


# Trader movement network

## Myanmar



## Lao PDR



↓ Denoted trader based villages with extremely high movements

# FMD awareness (villager & trader)

	Myanmar	Lao PDR
Aware of FMD	90 – 99%	86 – 95%
Had seen FMD affected animals	74 – 80%	88 – 90%
FMD reduced their income (loss draft power, treatment cost)	68 – 90%	75 – 84%
Did not apply any preventive measures	8 – 23%	34 – 63%
Use traditional treatment for control FMD	37 – 51%	39 – 74%
Reporting FMD to the authority	44 – 58%	12 – 17%



# Conclusion

- Movement for further usage (fattening/ breeding), long distance movements and frequent local movements; important for FMD circulation.
- High-risk location were identified for efficient FMD control.
- FMD awareness campaigns/ trainings for villager and trader.
- Gain animal movement data for development of FMD spread model.





# Acknowledgement

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