



Health risks of human and animal waste management and risk perceptions in Vietnam

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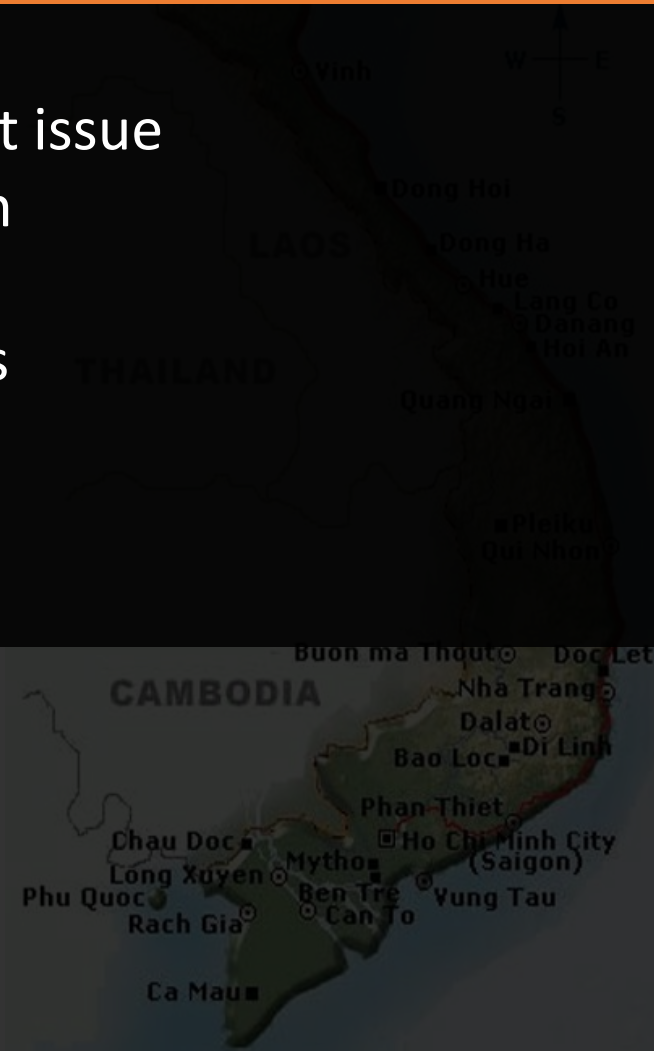


Ca Ma May 6, 2015



Agenda

- 1) Waste management issue
- 2) Purpose of research
- 3) Methods
- 4) Preliminary findings
- 5) Reflection





Agriculture and health have a complex relationship



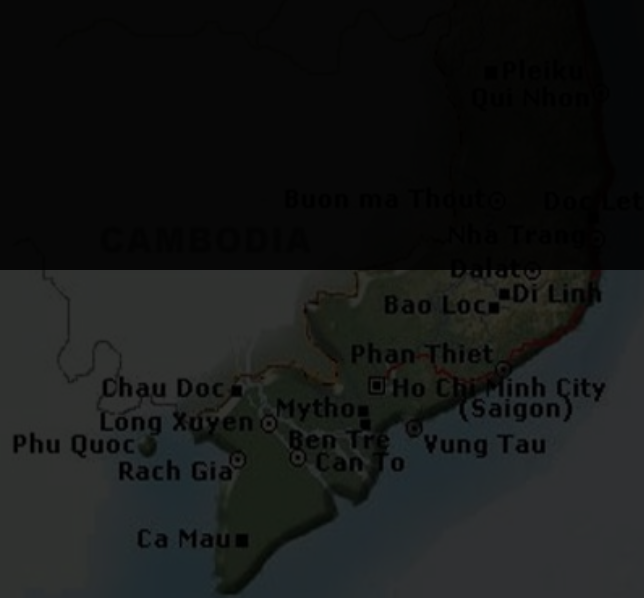
Waste management – a growing concern





Waste management (animal, human, water)

- ↑ economic growth, ↑ livestock production, ↑ waste but traditional technologies and management practices...
 - Concerns for environment and human health





Aims and methods

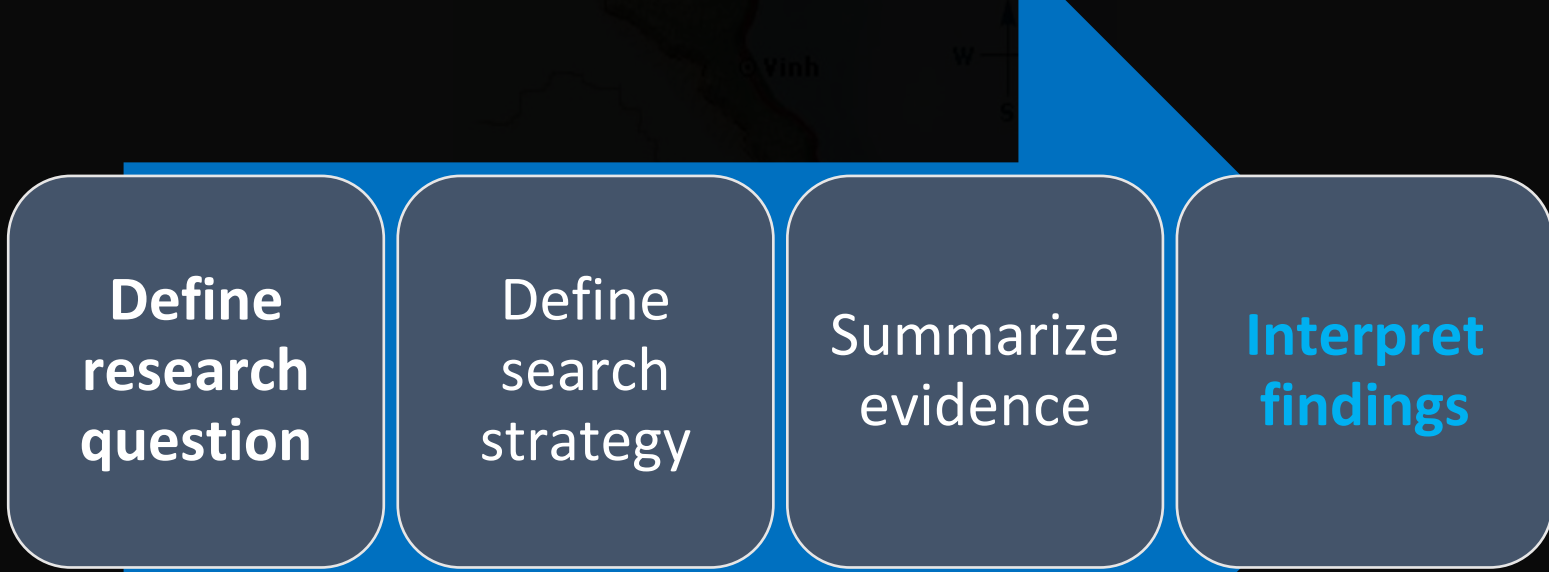
Aims: ➤ To explore linkages between waste management and health

Methods: ➤ *scoping review* to explore evidence
➤ *qualitative case study* to explore perceptions

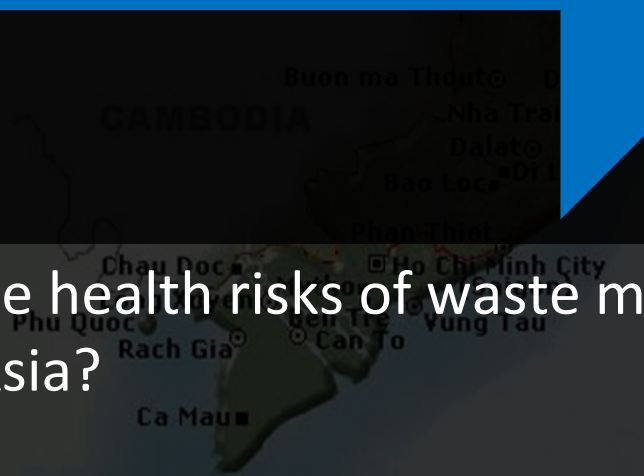
- Participants
 - Farmers
 - Community leaders
 - Researchers & ministry representatives (MOH, MARD)
- Data collection
 - **19** Key informant interviews



Scoping review



What are the health risks of waste management in Southeast Asia?





Search strategy (PubMed, CAB Direct)

Main terms	Expanded terms
Health effects	"adverse effect" OR health OR disease OR death OR morbidity OR mortality OR pathogen OR illness OR ailment OR allerg* OR zoonos* OR infection OR diarrhea OR "well-being" OR "well being" AND
Waste management	"agricultural waste" OR wastewater OR "waste water" OR "integrated waste" OR "faecal sludge" OR manure OR "animal waste" OR "solid waste" OR "human waste" OR "livestock waste" OR faeces OR feces OR "animal waste" OR excreta OR excrement AND
Location	Southeast Asia countries...



2441 articles identified through electronic searching of databases

625 duplicates removed

Primary

1816 articles screened

Secondary

178 full-text articles were assessed

26 studies included

+ 2 studies included from reference list

DistillerSR software

28 studies included for in-depth review

Ca Mau



Review: Health risks (28 studies)

Health (16/28)

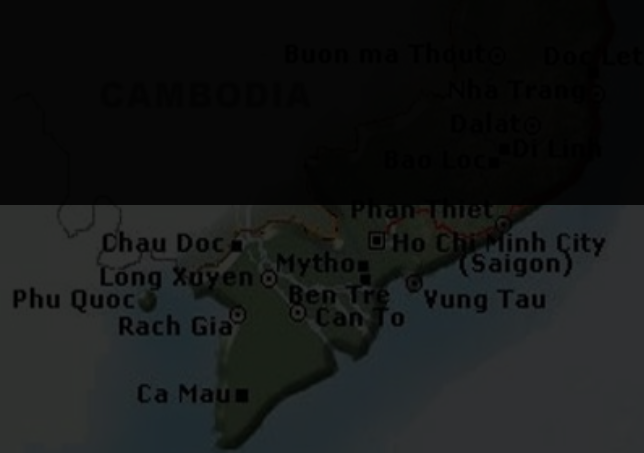
- Diarrhea
- Parasitic diseases (helminth)
- Skin disease

Perceived (4/28)

- Skin disease, bad smell

Environment (8/28)

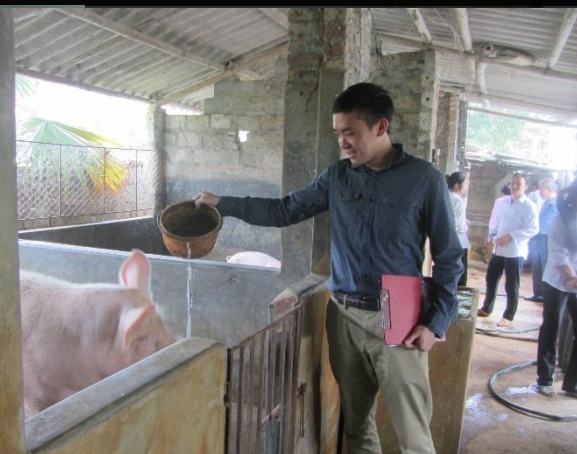
- Chemical pollutants, food exposure, treatment options





Interviews in Hanoi & Ha Nam

- 8 Farmers from Hoang Tay, Ha Nam
- 2 Community leaders from Hoang Tay, Ha Nam
- 9 Key stakeholders from Hanoi (MARD, MOH, research institutes)





Interview: Perceptions

Farmers

- Skin problems, “mùi hôi” (bad smell), eye problems, helminth, cancer

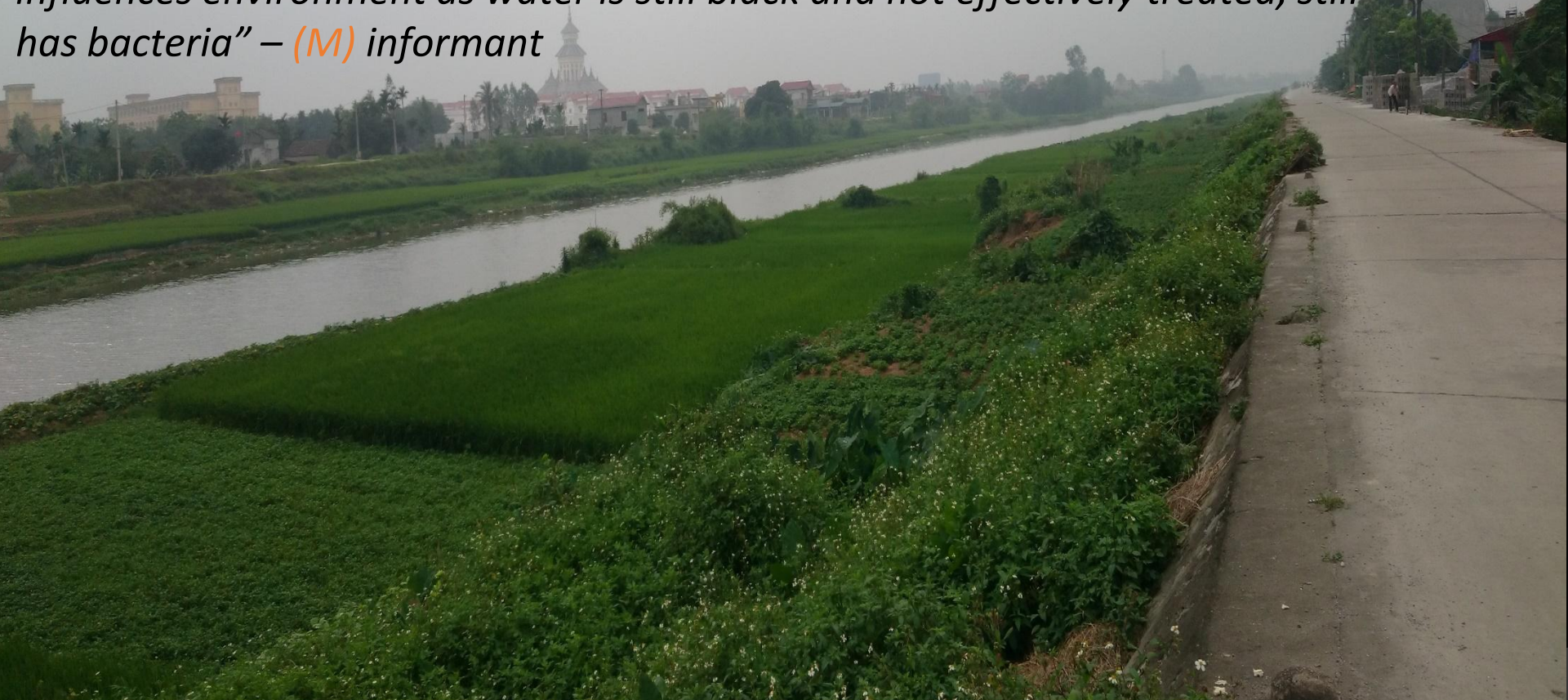
Key experts

- Skin problems, “mùi hôi”, diarrhea, parasitic, bacteria, virus, helminth, zoonotic, chemical



“It’s very terrible, all in the village, the smell is very heavy. Odour is a very big problem.” (F) farmer

“The water through the drainage system is still “kém” (low quality). It influences environment as water is still black and not effectively treated, still has bacteria” – (M) informant





Reflection and next steps

Reflection

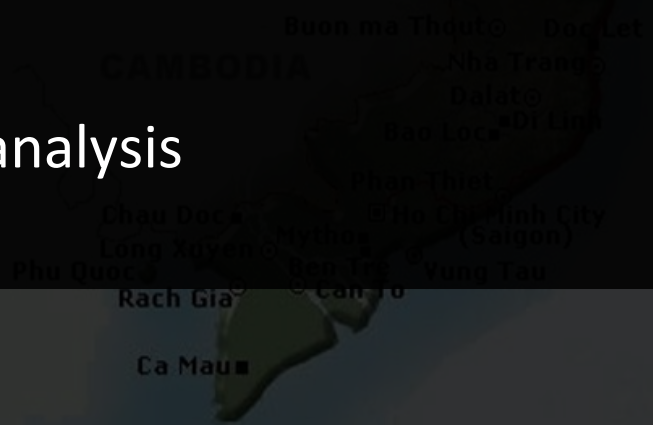
- Better understanding of health risks

Gaps in research

- Lack of gender perspectives, exposure assessments
- Subtle differences seen in literature vs interview
 - Implications for future research...?

Next steps

- Complete thematic analysis
- Finish manuscript(s)





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