

## Introduction

- One-third of children in Cambodia are stunted as a result of chronic malnutrition in early childhood<sup>1,2,3</sup>
- Most Cambodians get their animal source food products (ASF) products, which are an important part of the local cuisine, from informal “wet” markets, where the many foodborne disease outbreaks are believed to begin <sup>4</sup>
- The International Livestock Research Institute proposes to introduce a market-based intervention to reduce incidence of foodborne disease from animal source food products

## Objectives

- Determine women’s perceptions of the risk of food safety and how it relates to diet and health
- Identify barriers preventing children and mothers from accessing safe animal sourced food products



“That one is important. Because we were having meal together.”

## Methodology

- Interviewed 24 women (6 grandmothers, 18 mothers) responsible for care of a child under 5 on family nutrition habits, perceptions of food safety and barriers to food safety. All women also agreed to participate in food security questionnaire
- Using PhotoVoice<sup>5</sup> approach, after initial interview, women were loaned a camera for 2-3 days to take photographs of their food, food preparation, and other aspects of their lives that affected their nutrition

## Results

- Deep-seated fears of chemical contamination of foods affect how women feed their families
- Women prefer natural foods and would like to be able to grow their own vegetables, catch their own fish, and raise their own animals
- They feel that safer foods do exist, but are expensive and far away and therefore inaccessible
- Because resources to be able to grow their own foods or purchase safer foods don’t exist, they utilize a series of strategies to make foods safer for their families

## Selected Quotations and Photos by Identified Theme



**Chemicals affecting health:** “I’m afraid that it will affect the baby because of those chemicals in the vegetables. It is okay for us to eat them but the baby in the womb cannot handle all those chemicals.”



**Home grown as safe:** “I want to show that natural vegetables are hygienic and good for health. We should plant those vegetables such as banana tree, ivy gourd....by ourselves are better than buying from the market.”



**Caught fish as safe:** “I am rarely concerned about fish because I can catch it myself for.”

“If we had vast plain land, we would dig a pond and raise fish by ourselves. It’s easy eating and doesn’t have chemicals. But there is no land. I can only afford this house.”

**Purchasing Strategies:** “I buy the better-looking ones. For vegetables, if they don’t look good, I don’t buy them ... But on the goodness, if they look too good, I don’t buy it either. If there’s some caterpillar or something, we can wash them more. Those don’t have as many chemicals.”



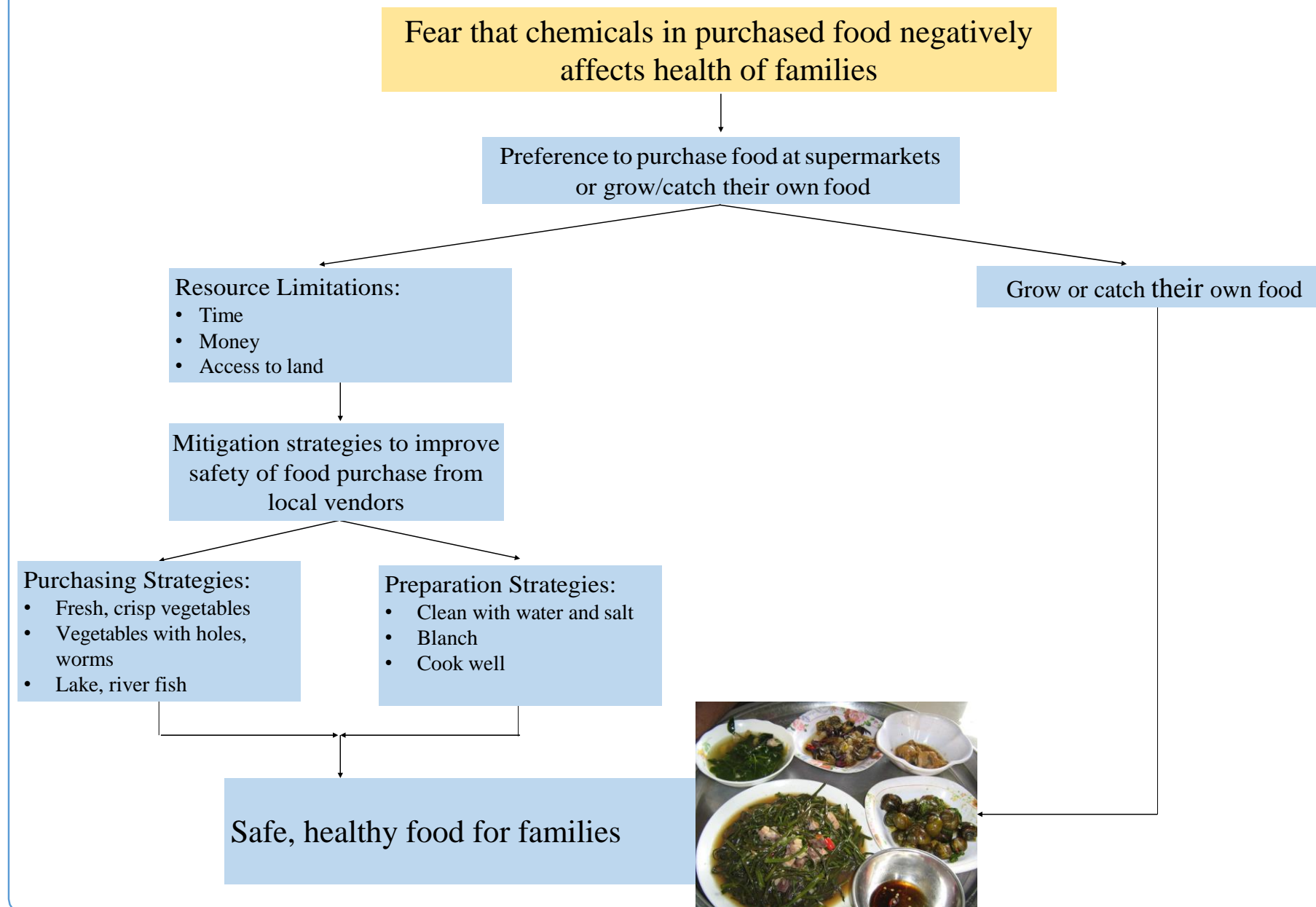
**Cleaning Strategies:** “Blanch to get rid of that stuff. I even clean it for three or four times. I soak it to eliminate the contaminated substances. I am afraid that they are exposed or are injected with chemicals. I’m afraid that it would cause diarrhea when eating.”



**Chemicals affecting food:** Because nowadays there are many chemical-injected meats. A few days ago, I bought half kilogram of pork. It smelled very bad...I then tried to marinate it and dried it under the sun; however, it still had bad smell.



## Conceptual Framework



## Possible Sources of Beliefs

- Facebook:**
  - “Mostly of my concern, I saw the post on Facebook. Do you see, there is pus in pork and beef.”
- Hearsay:**
  - “I heard people say they’re full of chemicals and are needed to be cleaned to get rid of some of the chemicals. That’s why we blanch them, dear.”
  - “A lot of people got food poisoning. It’s hearsay, but it’s scary.”



“The photo that my family is altogether, there is the husband and wife and everyone. The photo when we have a meal together.”

## Conclusions

- Women see chemicals use in foods as the cause of foodborne illness
- Although many of the women went into detail about the use of chemicals on vegetables, women also believe that chemicals are affecting their animal source food products
- Interventions that wish to decrease rates of foodborne illness and increase animal source food consumption should also address the belief that the food system has been compromised by the addition of chemicals and pesticides

## References

- <sup>1</sup>WHO World Health Organization, *Reducing stunting in children: equity considerations for achieving the Global Nutrition Targets 2025*. 2018, World Health Organization: Geneva.
- <sup>2</sup>National Institute of, S.C., H.C. Directorate General for, and I.C.F. International, *Cambodia Demographic and Health Survey 2014*. 2015, National Institute of Statistics/Cambodia, Directorate General for Health/Cambodia, and ICF International: Phnom Penh, Cambodia.
- <sup>3</sup>Monika Blossner, M.d.O., *Malnutrition: Quantifying the health impacts at national and local levels*, in *Environmental Burden of Diseases Series*. 2005, WHO World Health Organization.
- <sup>4</sup>Darapheak, C., et al., *Consumption of animal source foods and dietary diversity reduce stunting in children in Cambodia*. *Int Arch Med*. 2013. 6: p. 29.
- <sup>5</sup>Wang, C. and M.A. Burris, *Photovoice: concept, methodology, and use for participatory needs assessment*. *Health Educ Behav*. 1997. 24(3): p. 369-87.

## Acknowledgements

The authors would like to thank CelAgrid, the partnering non-governmental organization based in Phnom Penh, Cambodia. In particular, they would like to thank the research assistants and translators. Additionally, they would like to thank the mothers and grandmothers who participated in the study. Funding for this project was provided by the Global Field Experience Grant from Rollins School of Public Health, Emory University, and USAID through the Feed the Future Innovation Lab for Livestock Systems.