



Mapping pathways toward safer pork in Vietnam

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Background

Food safety is among the most pressing issues for people in Vietnam, often given more emphasis than education and healthcare (World Bank et al. 2016). A growing area of food safety concern is pork—the main animal source food in Vietnamese diets. Most pork products are produced by smallholders and sold in traditional wet markets. However, fresh pork is highly susceptible to microbiological contamination, presenting health and economic burdens. Understanding and addressing disease risk along the smallholder pig value chain is important to enhance food safety in Vietnam.

Although many studies have highlighted foodborne hazards associated with pork products in Vietnam (Nhung et al. 2018; Thai et al. 2012; Yamaguchi et al. 2015), only a few characterized the health risks related to pork production and consumption. Building this evidence base is crucial to inform policymakers of risk management strategies along the pork value chain. To fill this gap, the research project “Reducing disease risks and improving food safety in smallholder pig value chains in Vietnam” (PigRisk) was implemented from 2012–2017.

Using evidence generated from PigRisk, the “market-based approaches to improving the safety of pork in Vietnam” (SafePORK project) is developing light-touch interventions

to address food safety challenges in the pork value chain. SafePORK is a 5-year project (2017–2022) funded by the Australian Centre for International Agricultural Research. The goal of SafePORK is to reduce the burden of foodborne disease in informal and niche markets. To do this, SafePORK is using a One Health approach to build the capacity of researchers, value chain actors and policymakers in managing food safety risks within the pork sector.

SafePORK is piloting interventions in various value chain contexts in northern Vietnam. For example, in Hung Yen, the team is providing training on issues related to hygiene and procuring equipment such as grids and tables to support safe pork handling practices of slaughterhouses. The team is promoting the use of cutting boards, aprons and other hygienic measures among wet market retailers to improve pork safety.

Evaluation design: outcome mapping and theory of change

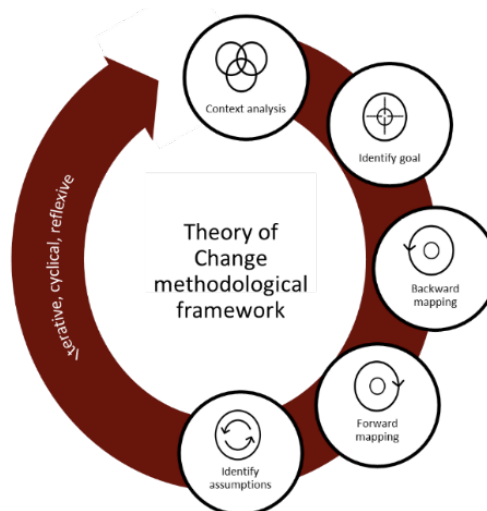
Outcome mapping is often considered promising in assessing projects implemented under complexity when multiple influences make it difficult to predict what will happen as the project progresses. SafePORK used outcome mapping to help the project be specific about actors it

intends to work with, behavioural changes it hopes to see and the strategies needed to achieve such changes. The theory of change (ToC) process helps make explicit the different ideas, hypotheses and assumptions about how change happens. However, a ToC does not tell us how to assess change. The SafePORK team combined ToC with tools offered by outcome mapping to support the project in not only learning about possible change pathways, but also measuring them.

Figure 1: Outcome mapping process



Figure 2: Theory of Change process



Operationalizing outcome mapping and theory of change

Outcome mapping is a three-stage process of intentional design, outcome, performance monitoring and evaluation planning (Figure 1). In the first stage, stakeholders create a vision of desired behavioural outcomes and outline strategies to be used in achieving such outcomes. The second stage provides a framework for monitoring progress toward changes identified in stage one. The third stage provides a framework for identifying evaluation priorities and conducting an evaluation. The team focused on intentional design to design SafePORK's monitoring and evaluation.

The ToC process involves identifying the goal and working backwards to identify what changes must occur in order to reach the goal (Figure 2). The crucial component in this process are the assumptions behind each causal link, which will be tested to explain why a project works. A ToC provides a unique way of thinking; by starting with the goals and outcomes, it puts a focus on systems change and how SafePORK might contribute to it. The SafePORK team operationalized outcome mapping and ToC through workshops with SafePORK researchers.

Mapping boundary partners, outcome challenges and progress markers

While SafePORK engages with many individuals, groups and organizations to achieve its vision ("boundary partners"), it focused its monitoring and evaluation efforts on slaughterhouse workers and retailers. The main challenge for these partners is to adopt and maintain hygienic pork handling practices they learned in the SafePORK training. Progress towards this outcome is being measured via progress markers that range from agreeing to take part in the identification of promising interventions to consistent changes in practice. Specifically, changes are measured in real time using strategy and outcome journals provided by outcome mapping.

Changes are evident from ongoing monitoring efforts and are being incorporated and adapted into the implementation process. For example, a slaughterhouse in Hung Yen is using grids and tables during carcass handling (Figure 3). Half of the investment to purchase some of the tables came from the owner of the slaughterhouse, which is an important step that shows buy in. The SafePORK team makes regular visits to the slaughterhouse to encourage hygienic practices and has generally witnessed better separation between clean and dirty areas.

Figure 3: Carcass handling on a grid system



At the traditional wet markets, we are seeing aprons, clothes and plastic cutting boards being used. All retailers now use separate cutting boards for raw meat and cooked meat. However, many retailers prefer wooden boards because they are better for chopping bones. To address this challenge, the project co-invested with retailers to purchase wooden cutting boards. Providing only one apron was another challenge considering aprons need to be washed and dried every day. Retailers suggested providing two aprons instead (Figure 4).

Figure 4: Wearing aprons at the market



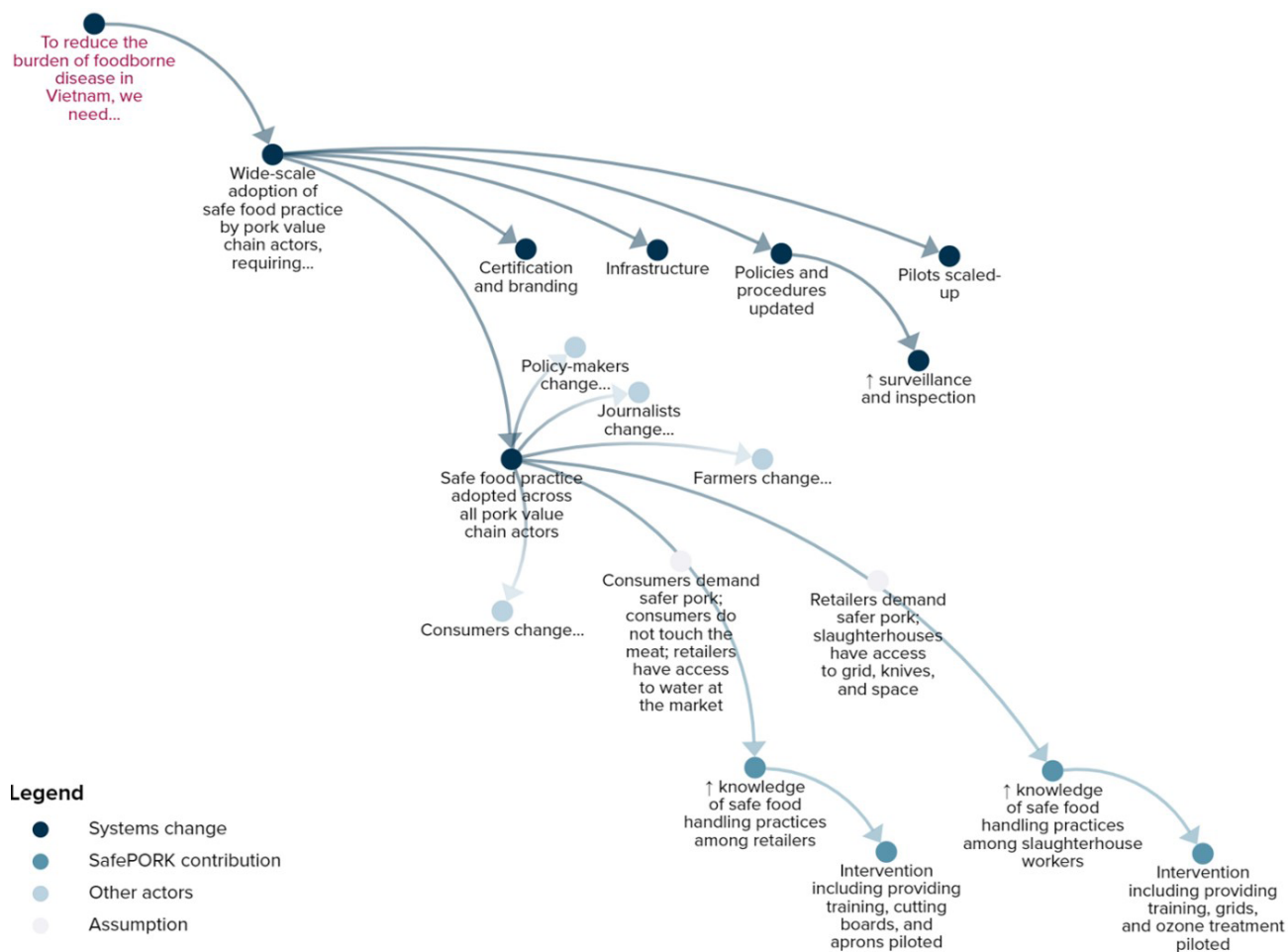
SafePORK's proposed theory of change

The overall goal of SafePORK is to reduce the burden of food-borne disease in traditional, emerging and niche markets (Figure 5). The SafePORK team thinks wide-scale adoption of safe food practice among all pork value chain actors is needed to achieve this goal. Two main pathways can lead toward this change—small-scale adoption of safe food practices and systems change.

Identifying and implementing cost-effective practices will enable small-scale adoption of safe food practices to be achieved. SafePORK plans to contribute to this outcome by piloting light-touch interventions. Many assumptions underly the causal link between SafePORK activities and improved safe food practices. For example, retailers, slaughterhouses and consumers must demand safer pork. Consumers must change food purchasing habits including not touching the raw meat.

Systems must be in place to foster behavioural change including certification, updating food safety policies, scaling up SafePORK pilots and improving surveillance. SafePORK plans to influence this outcome by presenting evidence from pilot interventions to policymakers through policy workshops and study tours. The team aims to make research findings accessible and relevant to policymakers and bring the food safety agenda to the forefront.

Figure 5. Theory of Change for SafePORK



Learnings and next steps

The SafePORK team agreed the ToC process was useful to look at the bigger picture. Furthermore, the ToC helped identify where to prioritize intervention efforts and long-term outcomes. An area of interest was how to meaningfully engage with policymakers in an attempt to influence both practice and policy.

A notable challenge encountered during the ToC process was identifying assumptions underlying change processes. Some assumptions were found large and required dedicated interventions to address them. For example, certification is likely not possible due to short timelines. More engagement with district authorities will be important in ensuring that laws, regulations and requirements for certification are considered.

Changes from the COVID-19 pandemic have presented opportunities to further introduce messages around handwashing and hygiene in informal markets. While there has been delays in follow-up site visits to slaughterhouses and wet markets, the team is maintaining consultations with partners through phone calls. Using outcome mapping journals, gradual changes toward steps in the change pathway are still being documented. We will continue to revise the ToC as the intervention continues to contribute to identifying better pathways towards safer pork in Vietnam.

Photo credit:

Page 1: ILRI/Chi Nguyen (right), and ILRI/Vu Ngoc Dung (left)

Page 2: ILRI/Hung Nguyen

Page 3: ILRI/Chi Nguyen

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