



Changes in researcher capacity in assessing food safety risks and value chains: Insights from PigRisk team

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Pork is the most widely consumed meat in Vietnam, making up 56% of total meat intake (OECD 2016). While pork production can support food security and improve livelihoods of many smallholder farmers, pork production can also have substantial health consequences. This issue has led to policies that favour industrialization and hinder smallholder access to markets. Yet, recent research suggest that smallholder value chains can be not only efficient, but also safe (ILRI 2012). There is a need for better understanding of disease risks and food safety in smallholder pig value chains.

In response to this need, an Australian Centre for International Agricultural Research (ACIAR) funded project entitled “Reducing disease risks and improving food safety in smallholder pig value chains in Vietnam” (PigRisk) was launched in August 2012. This five-year project aims to improve participation in, and incomes from, smallholder pig value chains.

PigRisk is led by ILRI in collaboration with Hanoi School of Public Health (HSPH) and Vietnam National University of Agriculture (VNUA). PigRisk has achieved several outputs to date, including: maps of value chain actors; assessments of production constraints of pig producers; estimates of health risks along the pork value chain; costs of economic

burden of pork-borne diseases; students trained; and publications and presentations. Currently, the team is developing and implementing interventions to positively influence behaviours of value chain actors and improve food safety.

PigRisk was designed to build capacity in assessing and managing health risks; and in strengthening collaboration between disciplines. This brief highlights the PigRisk approach, as well as some key outcomes achieved by PigRisk in building capacity and collaboration up to March 2016.

The PigRisk approach

At the beginning of PigRisk, outcome mapping (see definition) was used as a planning tool to help the project be specific about its target group and learn about its influence on the group. Through a participatory process, the vision and mission of PigRisk was shaped, along with the identification of program target groups.

Vision

“To achieve a sustainable smallholder pig value chain and improve human health in Vietnam through better

management of food safety risks, animal health, and the environment, while increasing incomes by and for smallholder farmers.”

Mission

Through a risk-based approach, the PigRisk team will assess the risks to human and animal health, and identify critical control points in pig value chains. Incentive-based interventions will be developed and tested to reduce identified risks. The team will engage with and build the capacity of **researchers, selected value chain actors, and policymakers**, whose roles are crucial to food safety risk assessment and management.

PigRisk team



Uncovering PigRisk outcomes

Outcomes are defined as “changes in behaviour, actions, activities, relationships, policies, or practices of an individual, group, community, organization, or institution.”

Often used together with outcome mapping, is a tool called **outcome harvesting** (see definition). On February 2015, principles of outcome harvesting were used to capture PigRisk outcomes from the perspective of PigRisk partners (researchers from HSPH and VNUA). Facilitators led a session to capture reflections, which are summarized below.

Improved capacity in assessing risks

PigRisk hosted, co-hosted or contributed to more than 10 training sessions and workshops. Research teams learned and applied new tools including rapid value chain analysis, system dynamics modelling, and food safety and health risk assessments. All researchers emphasized improved research skills, in particular, writing publications.

Strengthened relationships and gaining recognition

Through PigRisk research activities and frequent engagement with key actors, existing relationships among provincial, district, and communal governments in Hung Yen and Nghe An were strengthened. Further, the VNUA economics team gained recognition as ‘specialists in value chains’, and have been contacted by several institutions (e.g. Can Tho University) to offer their consultancy services on value chain analysis.

The VNUA economics team, along with other organizations working on value chains, presented at a national workshop in 2013 hosted by Ministry of Agriculture and Rural Development. The workshop summary called for more research on value chains (see news article <http://baodientu.chinhphu.vn/Hoat-dong-cua-lanh-dao-Dang-Nha-nuoc/Lien-ket-chuoi-de-tranh-san-xuat-manh-mun/180109.vgp> and quote from Pham Van Hung).

Collaboration and transdisciplinary research

Each PigRisk team focuses on a component of the value chain; the HSPH team focuses on food safety and health risk assessments, the VNUA economics team focuses on economic assessments, and the VNUA veterinary team focuses on animal health.

PigRisk provided an opportunity to work across disciplines and institutions, which was new for some teams. Participants emphasized the value added of mutual learning from working with individuals from different backgrounds (e.g. public health, economics, food safety, veterinary medicine).

A taskforce of risk assessment for food safety between researchers and policymakers was formed in 2013 to build capacity of using risk-based approaches for food safety management. The PigRisk team was involved in the inception of the taskforce, and has been playing a key role in implementing the taskforce activities (Nguyen-Viet 2012).

Incorporating value chain analysis into education

Several researchers reflected on how PigRisk research was used to inform teaching:

“I deliver lectures on the ‘principles of statistics’. Before PigRisk, I found it hard to give examples. Now, with research experience from PigRisk, it is easier to provide information on current and local situations, such as food safety issues in Hung Yen. Before it was just assumptions”—VNUA economics researcher.

“Reflecting on the PigRisk research process and findings from the chemical risk assessment, I developed a scenario case study on chemicals in pork for the ‘Environmental Health Risk and Health Impact Assessment’ course for the Masters in Public Health students”—HSPH researcher.

Going further, the importance of value chains gained through PigRisk research led to the development of two new courses (BSc and MSc) entitled ‘Value Chain Analysis’

under the economics department of VNUA (2015). One researcher also reflected on how PigRisk experiences will be useful in developing a new required 'One Health' course for the Masters in Public Health students majoring in Environmental Health at HSPH. Through incorporating PigRisk research into education, risk assessment capacity is improved, along with sustainability of PigRisk achievements.

Field visit to a smallholder slaughterhouse



Challenges

While certain outcomes were achieved, mainly in building capacity of PigRisk researchers, several key challenges were noted. For instance, the turnover of members was quite high (mainly due to pursuit of higher studies), leading to delays in some activities. Of course this was also a positive outcome, because project members obtained new opportunities.

Reflecting on expected or future outcomes of PigRisk was challenging. However, one participant reflected on the desire for more specific training, for instance on system dynamics modelling, and hoped to be able to create simple models in the future. It is also important to note that some expected outcomes have already been captured in previous outcome mapping activities. One participant reflected on potential disagreements in intervention planning. For example, while an intervention may be good at changing behaviour, it may not be feasible economically.

Next steps

Outcomes will be collected again from PigRisk team towards the end of the project to determine changes in behaviours, actions, and practices of researchers. Further, reflections will also be collected from the perspective of intervention actors (e.g. slaughterhouse workers, retailers) midway through the intervention (tentatively June 2016), as well as the end of the intervention (tentatively Dec 2016).

Definitions

Outcome mapping is an approach to planning, monitoring and evaluating development programs. Outcome mapping provides a set of tools to design and gather information on 'outcomes', defined as behavioural changes. These tools can be used as stand-alone or in combination with other monitoring and evaluation systems, and can be applied in whole or in part.

Outcome harvesting is an evaluation approach that identifies and formulates outcomes, then works backwards to see how the project has contributed to the outcome.

Outcome mapping and outcome harvesting both represent new ways of thinking about change, monitoring, and evaluation.

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