



A COLLECTION OF BARRIER ANALYSIS STUDIES:

**INVESTIGATING AND ADDRESSING  
THE MAIN BARRIERS CAMBODIAN  
FARMERS FACE TO PRACTICING POSITIVE  
POULTRY MANAGEMENT PRACTICES**

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### PIN'S EXECUTIVE REPORT SERIES

Investigating and addressing the main barriers Cambodian farmers face to practicing positive poultry management practices

**Published by:** People in Need (PIN) in January 2018

**Research Conducted in:** Pursat and Kampong Chhnang provinces, Cambodia

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**This publication is supported by: EU, CZDA, PIN, GDAHP**



In partnership with: EPDO, PNKA, CIRDP



## DATA-DRIVEN APPROACH TO ENABLING FARMERS TO PRACTICE EFFECTIVE POULTRY MANAGEMENT PRACTICES



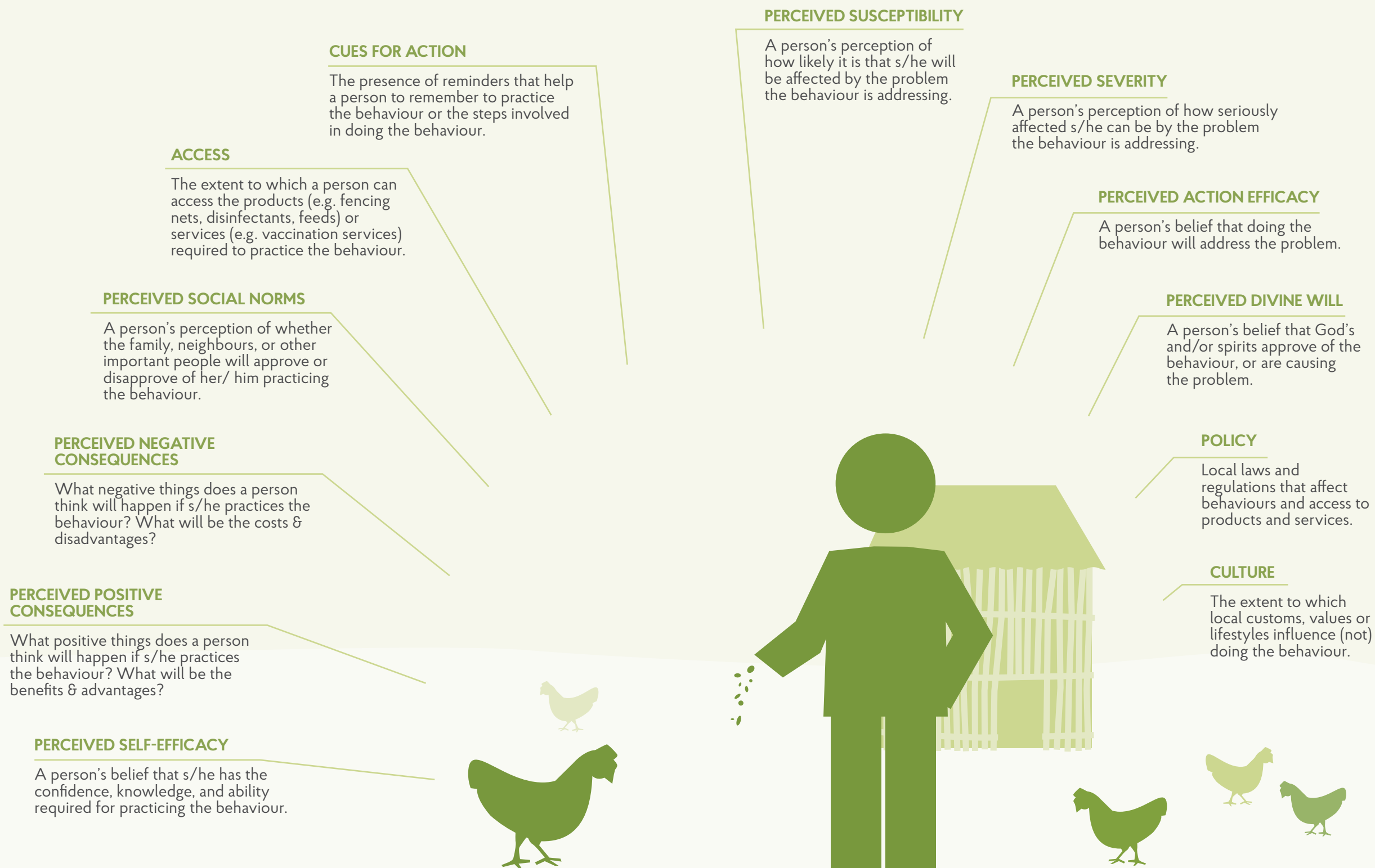
### Introduction

One of the main objectives of development practitioners is to enable people to adopt and practice positive behaviours that help them to improve the quality of their lives. Let's take an example of poultry farmers: in order to raise their animals well, they have to regularly undertake various biosecurity measures to prevent diseases from spreading, vaccinate their animals, keep them in suitable pens, provide the correct amount of feed, and follow many other practices. Although these behaviors are proven to improve farmers' productivity, only few smallholder farmers living in low-income countries adopt them and keep using them in the long-term. **So the question is – what is preventing farmers from practicing these positive behaviors?** Development projects frequently make assumptions about why people do not follow the positive behaviors these interventions promote. However, such assumptions are often wrong and decrease the effectiveness of well-intended interventions.

**People in Need (PIN)** believes that the best approach to commencing new projects is to thoroughly understand people's attitudes,

beliefs and practices regarding the behaviors the intervention aims to change. Over recent years, PIN has therefore conducted three Barrier Analysis studies, to identify and address the main factors that prevent farmers from adopting and following effective poultry management practices. This executive report shares with development practitioners and relevant government officials the key findings and recommendations from this research. The Barrier Analysis studies were conducted under PIN's *Community Livestock Market Development (CLIMAD)* 2013-2016 and Civil Society, Authorities and Markets for Sustainable Community Animal Production, Livelihoods and Environment (CAM 4 SCALE) 2016-2018 projects. These projects were funded by the European Union (EU), Czech Development Agency (CZDA) and the General Department of Animal Health and Production (GDAHP), and implemented in partnership with local partners Environmental Protection and Development Organization (EPDO), Phnom Neang Kangrei Association (PNKA) and Cambodian Institute for Research and Development (CIRD).

# WHAT DETERMINES PEOPLE'S BEHAVIOURS?<sup>1</sup>



<sup>1</sup> Behaviour Change Toolkit, Schmied, P., 2017

## Research Methodology

The research used the Barrier Analysis, a quantitative and qualitative methodology that asks people a series of questions aimed at identifying which barriers and motivators have the biggest influence on whether they (do not) practice a given behaviour. Barrier Analysis studies use the Doer/Non-Doer methodology that consists of interviewing 45 people who already practice the behaviour (Doers) and 45 people who have not yet adopted the behaviour (Non-Doers). The difference between the Doers' and Non-Doers' responses reveals which barriers and motivators are most significant. For example, if a large portion of Doers believe that keeping chickens in the coop has positive consequences for the growth rates of chickens, whereas only a few Non-Doers think so, then we know that this is an area in which we need to focus in order to encourage the positive practice. The focus of the Barrier Analysis is always on the way the respondents perceive the behaviour, irrespective of whether we think it is right or wrong. Based on the findings, it is possible to develop tailored activities that tackle the identified barriers preventing the promoted behaviours.

To learn more about Barrier Analysis, explore PIN's Behaviour Change Toolkit and [www.behaviourchange.net](http://www.behaviourchange.net) website.

## Research Background – Understanding low productivity rates among poultry farmers.

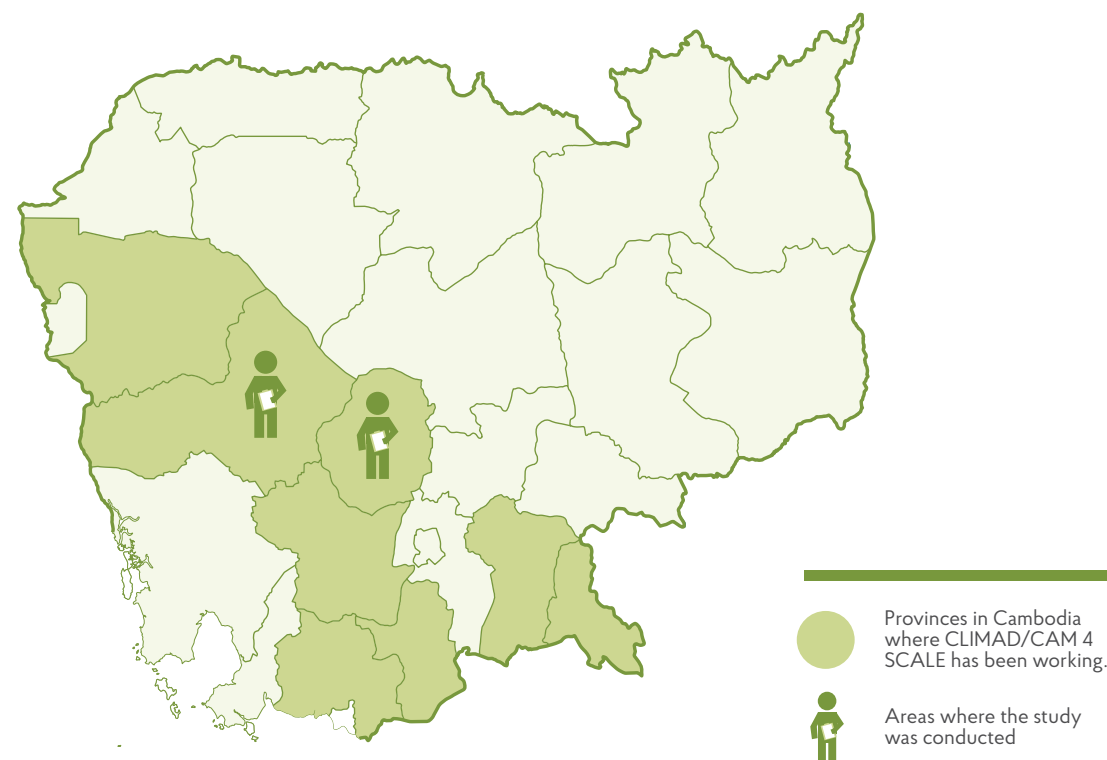
The majority of the population in Cambodia live in rural areas where poverty levels are at their highest. For the poorest households, poultry raising is one of the main income generating opportunities, as it requires relatively small amounts of land, and has low start-up and operational costs. Despite the increasing market demand, high transaction costs across the supply chain, limited availability of extension services, poor access to credit, and underperforming markets make it difficult for smallholder livestock farmers to take full advantage of the poultry production's economic and poverty reduction potential.

Within this context, since 2013, PIN has been working in eight provinces in Cambodia<sup>2</sup> to address these constraints and sustainably improve the livelihoods of poorer farmers. A market systems development (MSD) approach has been used in order to strengthen commercial access to and demand for veterinary services and inputs and to improve farmers' livestock productivity and management practices. Interventions have also been aimed at increasing farmers' access to markets and access to fair and stable prices, as well as providing platforms for farmers to voice their concerns with government authorities.

One of the main constraints affecting smallholder poultry farmers is scarce productivity, which is partly attributable to the absence of technical knowledge and the widespread use of unproductive poultry raising practices.

To better understand what is preventing poultry farmers from following more effective poultry production practices, PIN conducted three Barrier Analysis studies focusing on the following behaviours: *Chicken vaccination, coop disinfection and raising chickens in coops.*

## ACTIVITIES IN CAMBODIA



### Key information about the poultry sector in Cambodia:



**95% of farmers never vaccinate their poultry against common diseases** such as Newcastle, Fowl Pox and Cholera.<sup>3</sup>



Outbreaks of diseases are exacerbated by limited use of disinfectants within chicken coops, as **less than 3% of poultry farmers are estimated to apply biosecurity measures.**



**70% - 80% of farmers let chickens roam outside of their coops**, which reduces the growth rate of poultry and increases the likelihood of diseases.



These behaviours contribute to high mortality rates, which on average are 35% among adult chickens<sup>4</sup>. Considering 26 million adult chickens were raised in Cambodia in 2013<sup>5</sup>, **the economic loss nation-wide is estimated to be 34 million US Dollars<sup>6</sup>** per production cycle (four to six months).

<sup>2</sup> Figure 1, PIN operations in Cambodia.

<sup>3</sup> CLIMAD Baseline, 2013

<sup>4</sup> CAM 4 SCALE Baseline, 2016

<sup>5</sup> Census of Agriculture in Cambodia, 2013.

<sup>6</sup> Based on the average farm-gate price for chicken of 3.75 USD. PIN Market Price Monitoring Tool, 2017.

## BARRIER ANALYSIS STUDY ON FARMERS VACCINATING THEIR CHICKENS

**Background:** Conducted in 2016 in Pursat and Kampong Chhnang provinces, involving 45 'Doers' and 45 'Non-Doers'.

**Studied Behaviour:** Farmers regularly vaccinate chickens with at least 2 out of 3 types of vaccines to prevent Newcastle disease, Fowl Pox or Cholera.

### Prevalence of the Behaviour:



Only approximately 5% of farmers regularly vaccinate their chickens in the targeted areas<sup>7</sup>.



### FINDINGS:

#### What prevents farmers from vaccinating their chickens?

##### SELF-EFFICACY:

Farmers lack the knowledge and capacities required to have their poultry regularly vaccinated.

##### ACTION EFFICACY:

Some farmers doubt the effectiveness of vaccinations in preventing chickens from illness and death.

##### ACCESS:

Farmers who do not vaccinate chickens believe that accessing vaccines is difficult.

##### CUES FOR ACTION:

Often farmers find it difficult to remember to vaccinate chickens regularly.

#### What motivates farmers to vaccinate their chickens?

##### SOCIAL NORMS:

Farmers are more motivated when the wider community (family members, village chiefs, neighbours) approve and encourage the practice of vaccinating chickens.



### RECOMMENDATIONS:

#### How can we address these barriers?

##### SELF-EFFICACY:

- Build the capacity of Village Animal Health Workers (VAHWs) in **delivering (and creating demand for) vaccination services** on a commercial basis at the village level. **Linking VAHWs with larger veterinary companies** can be an effective way for them to gain longer-term access to capacity building opportunities.
- Work with VAHWs to **train farmers** on how to safely vaccinate their own poultry independently.
- Encourage farmers to share their technical expertise and experience by working in groups, and to **access vaccination services collectively** from VAHWs. This can reduce vaccination costs, increase VAHWs' incentive to deliver the service as well as strengthen peer-pressure to vaccinate chickens.

##### ACTION EFFICACY:

- **Support further research** into the efficacy of different brands of vaccinations available in Cambodia and disseminate the findings.
- Support veterinary shops and VAHWs in promoting and selling **better quality vaccinations** from trusted suppliers by providing them with available information on the known effectiveness of vaccinations from different companies.
- Increase the awareness of veterinary shops and VAHWs on the importance of **storing vaccination at the correct temperature**.
- Support **information dissemination** among farmers on how they can identify high quality and correctly managed vaccinations.

##### ACCESS:

- Support VAHWs to create awareness and build demand for their services through **village-based promotion campaigns**.

##### CUES FOR ACTION:

- Encourage VAHWs to frequently **remind their clients to vaccinate their chickens** and to stress the importance of vaccinating any new flocks in order to minimise the risk of disease outbreaks.

## BARRIER ANALYSIS STUDY ON SMALLHOLDER FARMERS DISINFECTING CHICKEN COOPS

**BA study:** Conducted in 2017 in Kampong Chhnang province, involving 45 'Doers' and 48 'Non-Doers'.

**Studied Behaviour:** Farmers regularly disinfect their chicken coops by using (one of the) promoted disinfectants.



### Prevalence of the Behaviour:



Less than 3% of farmers in the target provinces are estimated to regularly disinfect their chicken coops.

### FINDINGS:

#### What prevents farmers from disinfecting their chicken coops?

##### SELF-EFFICACY:

The lack of specific knowledge and skills on how to use the disinfectants properly makes it difficult for farmers to apply this practice on their chicken coops.

##### ACCESS:

Some farmers have difficulties in finding a shop that sells the necessary disinfectants.

##### CUES FOR ACTION:

Farmers often find it very difficult to remember to use the disinfectant regularly and correctly.

#### What encourages farmers to disinfect their chicken coops?

##### SOCIAL NORMS:

Poultry raisers are more motivated when the wider community (village chiefs, family members and neighbours) approve and encourage the practice of disinfecting chicken coops.

##### SELF-EFFICACY:

Farmers that spray disinfectants in chicken coops perceive the practice and storage of the products as easy and practical in effectively sanitizing the coops.

### RECOMMENDATIONS:

#### How can we address these barriers?

##### SELF-EFFICACY:

- Support VAHWs and model farmers to provide **practical farm-based training and coaching** to farmer groups on how to correctly use and store the disinfectants, with particular emphasis on safety precautions.
- Work with local disinfectant suppliers including veterinary shops, VAHWs and Agricultural Cooperatives to develop and disseminate **informative materials** with very simple instructions on how the disinfectant should be utilised by farmers. In order to encourage farmers to regularly practice the behaviour, the visual materials should emphasise how easy the disinfectants are to use and store along with information on their safe use.

##### ACCESS:

- Work with input suppliers including veterinary shops, VAHWs, and Agricultural Cooperatives to **integrate the sale of disinfectants into their supply chains**. Projects can provide support by conducting market research to assess local farmers' demand for the disinfectants.

##### CUES FOR ACTION:

- Encourage VAHWs to frequently **remind farmers** to utilise the promoted disinfectants on a regular basis, when providing other services to them.

##### SOCIAL NORMS:

- Encourage VAHWs to identify and **work with key influencers in the community** (e.g. village chiefs), who can become early adopters of the new practice, and can positively influence other poultry farmers that are not disinfecting their chicken coops.

## BARRIER ANALYSIS STUDY ON SMALLHOLDER FARMERS KEEPING CHICKENS IN THE COOPS

**BA study:** Conducted in 2017 in Kampong Chhnang province, involving 45 'Doers' and 48 'Non-Doers'.

**Studied Behaviour:** Poultry farmers keep chickens in the coop at least 90% of the time.

### Prevalence of the Behaviour:



Less than 20% of farmers in the target provinces are estimated to keep chickens in coops for 90% of the time, with the majority of farmers letting them roam outside freely.

### FINDINGS:

#### What prevents farmers from keeping chickens in the coop?

##### SELF-EFFICACY:

Farmers often lack the confidence and knowledge on how to keep chickens in the coop for an extended time. Farmers have the perception that chickens bite each other if they are kept in the coop at all times.

##### POSITIVE CONSEQUENCE:

Farmers are often unaware of the benefits of keeping chickens in the coop, such as easier poultry management (provision of feed, medicines and water) and faster rates of growth.

##### ACCESS:

Some farmers find it difficult to pay for the fencing net to build the chicken coop.

#### What encourages farmers to keep chickens in the coop?

##### SOCIAL NORMS:

Farmers are more motivated to keep chickens in coops when members of the community (village chiefs, family members), and especially neighbours, approve the practice.



### RECOMMENDATIONS:

#### How can we address these barriers?

##### SELF-EFFICACY:

- Strengthen VAHWs **coaching and mentoring of farmers** that do not keep their chickens in the coops. Ensure that during training, coaching sessions and exchange visits, VAHWs emphasise the benefits of keeping chickens in the coop and how easy this practice is to do.
- Ensure VAHWs training programs for farmers emphasize the importance of having **appropriately sized chicken coops** (according to the flock size), and are focussed on proper **feed usage**, to minimize fighting among chickens.
- Encourage farmers to grow Chaya, lemon grass and other suitable plants in the chicken coop as a **supplementary feed** and source of low cost protein for poultry.

##### POSITIVE CONSEQUENCES:

- Develop **communication materials** (leaflets and posters) highlighting the benefits of keeping chickens in coops instead of allowing them to roam freely. The key messages should highlight the advantages in managing poultry and increasing growth rates of chickens. VAHWs and inputs suppliers should be encouraged to disseminate the visual materials.

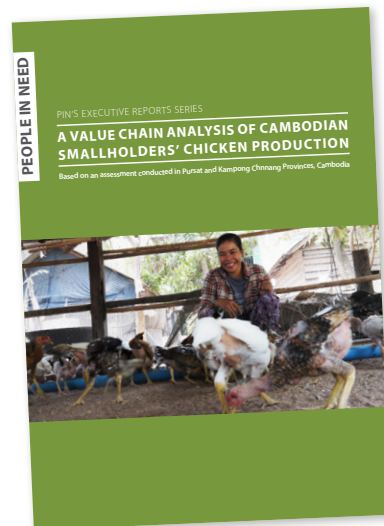
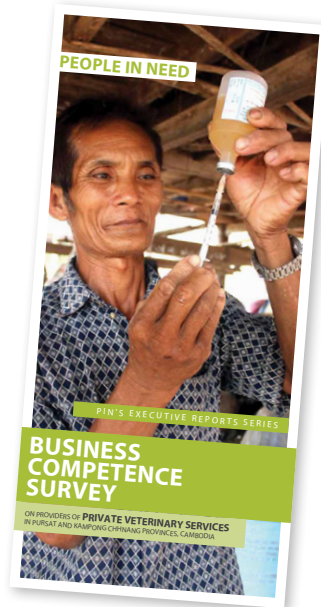
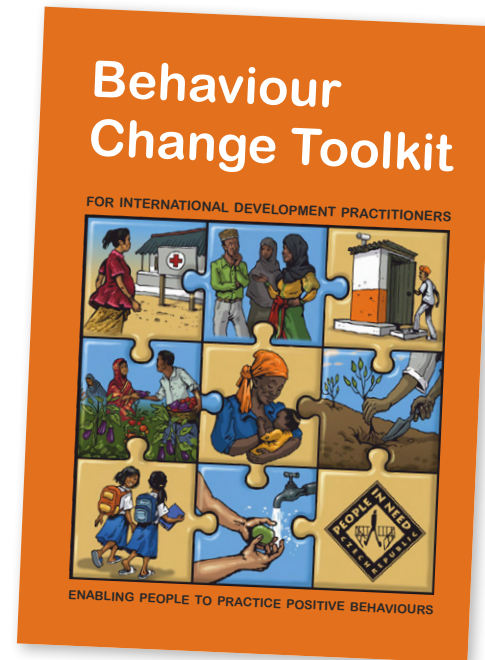
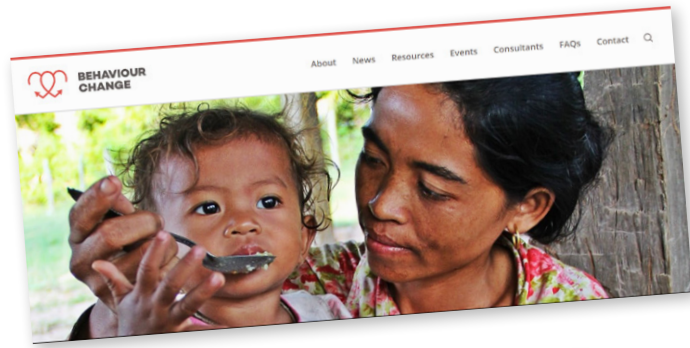
##### ACCESS:

- Encourage Agricultural Cooperatives to disburse **small loans** for farmers to buy fencing nets.

##### SOCIAL NORMS:

- Ensure that farmers who are letting poultry roam freely **participate in exchange visits** to learn from model farmers that are practicing this behaviour correctly, in order to encourage the adoption of the new practice.

ADDITIONAL RESOURCES:



This publication is a summary of three **Barrier Analysis Studies**. If you are interested in learning more about each individual study contact the PIN Cambodia team at [climad@peopleinneed.cz](mailto:climad@peopleinneed.cz) or browse [www.peopleinneed.cz](http://www.peopleinneed.cz).





**People in Need (PIN)** is a Czech non-governmental organization providing relief and development assistance in developing countries while working to defend democratic freedoms. PIN has worked in Cambodia since 2008, supporting the implementation of the Royal Government of Cambodia's development priorities. PIN's focus in Cambodia is on market development for improved livelihoods and environmental protection; maternal and child health with a special focus on nutrition newborns and water sanitation; disaster preparedness and response; and urban and habitat advancement. PIN closely cooperates with local partner NGOs, relevant Government departments and Alliance2015 partners.