EVIDENCE-BASED RISK MANAGEMENT ALONG THE LIVESTOCK PRODUCTION AND MARKET CHAIN

REGIONAL OVERVIEW
Poultry production in Southeast Asia has been challenged by various animal disease threats, including highly pathogenic avian influenza (HPAI, also referred to as ‘bird flu’) and other emerging zoonotic and transboundary animal diseases. To mitigate the risk, emergence and spread of new pandemic disease threats, the Food and Agriculture Organization’s Emergency Centre for Transboundary Animal Diseases (FAO-ECTAD) in collaboration with the United States Agency for International Development (USAID) and Australia’s Department of Foreign Affairs and Trade (DFAT) is implementing the project “Evidence-based risk management along the livestock production and market chain” in the region. The project implementation began in 2017 in the Association of Southeast Asian Nations (ASEAN), which includes Cambodia, Lao People’s Democratic Republic, Myanmar and Viet Nam.

**Strategic vision**

- **Multi-sectoral coordination for animal disease prevention and control.**
- **Development of epidemiology capacity and networks in the region to strengthen risk management.**
- **Gathering evidence through piloting of risk management interventions along livestock value chains in select project locations in Cambodia, Lao People’s Democratic Republic, Myanmar and Viet Nam for building resilience and risk reduction.**
Project activities timeline

**2017**
- Project launching workshop organized in Bangkok, Thailand
  - June
- Country inception workshop held in Cambodia and Lao People’s Democratic Republic
  - Nov
- Livestock value chain module developed, piloted & incorporated into the Regional Field Epidemiology Training Programme for Veterinarians (R-FETPV)
  - April-Dec
- Regional project workshop held to monitor progress and share lessons learned
  - May
- Technical support given to ASEAN Secretariat for the first meeting of Avian Influenza Group for ASEAN (AIGA) held in Indonesia
  - Aug

**2018**
- Implementation of biosecurity and farm management improvement activities began in all four pilot countries
- Two value chain studies completed in Takeo, Cambodia and Luangprabang, Lao People’s Democratic Republic
  - Sep-Dec
- Technical support provided for zoonotic disease control at ASEAN policy level (ASEAN Coordinating Centre for Animal Health and Zoonoses - ACCAHZ)
  - June
- Rapid assessment of gender roles in poultry value chains in target pilot countries conducted and recommendations provided

**2019**
- Regional value chain workshop conducted to update the regional poultry value chain map
  - April
- Workforce development action package review conducted for strengthening the Global Health Security Agenda (GHSA)
  - May
- Technical support given to ASEAN for developing a regional framework for an HPAI-free ASEAN post 2020
  - Nov
- Regional end of project workshop
## Project activities

### 01 Multi-sectoral coordination strengthened

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<tr>
<th>Provided coordination and technical inputs at regional and country levels to support project progress and delivery.</th>
<th>Provided support to develop ASEAN’s regional framework for avian influenza (AI) control.</th>
<th>Provided technical support to the ACCAHZ for developing a regional coordination mechanism for zoonotic disease control.</th>
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<td>Engaged with governments, the private sector, local authorities and gender groups to promote multi-sectoral One Health approaches for improved governance, and risk mitigation.</td>
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<td>8 meetings held among partners to monitor progress and discuss scale-up.</td>
<td>Support provided to 3 high-level meetings related to the ASEAN Regional Framework for HPAI Control.</td>
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<td>Provided technical support to two meetings related to strengthening health systems for zoonoses and antimicrobial resistance (AMR):</td>
<td>• GHSA meeting to review Workforce Development Action Package.</td>
<td>• 8th Regional Tripartite Meeting for Multi-Stakeholder Collaboration.</td>
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### 02 Regional epidemiology capacities and networks strengthened

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<th>Provided technical inputs and support to R-FETPV, particularly in conducting value chain analysis and economic impact assessment for risk management.</th>
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<th>Supported participation of countries in scientific conferences to facilitate networking, information and knowledge sharing.</th>
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<td>4 reports published with information on policies relevant to socio-economic development.</td>
<td>4 biosecurity improvement initiatives undertaken in Cambodia, Lao People’s Democratic Republic, Myanmar and Viet Nam.</td>
<td>A report on guidelines for conducting value chain analysis developed.</td>
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**A value chain module developed, piloted and now included as part of the curriculum in the regional FEPTV**

Supported the implementation of the 3 modules of R-FETPV, 42 participants (22 male and 20 females) from the ASEAN region attended as the cohort 2017 – 2019.
Evidence-based risk management along the livestock production and market chain strengthened

Value chain studies conducted across high-risk areas of poultry production in Cambodia and Lao People’s Democratic Republic to identify risk points related to disease transmission. Guidelines to conduct value chain studies using participatory approaches developed for countries to update their value chain information on a regular basis.

Baseline information collected and collated for updating and mapping livestock distribution data to identify risk drivers for controlling the emergence and spread of zoonotic diseases.

Rapid assessment of gender roles in poultry value chains conducted in countries and recommendations provided for gender sensitive programming for risk reduction.

Implemented relevant risk management plans in the four pilot countries

- **Viet Nam:**
  - Promoted the improvement of production practices and flock health management as appropriate for in-country context, engaging the private sector and linking to ASEAN guidelines on Good Animal Husbandry Practices (GAHP).
- **Cambodia:**
  - Developed standards operating procedures (SOPs) relevant to risk reduction which were adopted by the stakeholders.
- **Lao People’s Democratic Republic:**
  - Including a hatchery auditing checklist for good biosecurity practices as an Annex into national legislation (Circular 45) is in progress. This will provide support to a harmonized certification scheme of small-scale hatcheries in the country to reduce the risk of disease transmission.
- **Myanmar:**
  - Improving poultry health and production in Luang Prabang (Lao People’s Democratic Republic).
  - Improving Risk Management in Yangon Poultry Farms.
  - Improving biosecurity and biosafety at Takeo Live Bird Market (LBM).
  - Improving farm biosecurity and biosafety in Bac Giang Province.

Policies relevant to risk reduction developed for adoption by authorities

- **Viet Nam:**
  - Inclusion of a hatchery auditing checklist for good biosecurity practices as an Annex into national legislation (Circular 45) is in progress. This will provide support to a harmonized certification scheme of small-scale hatcheries in the country to reduce the risk of disease transmission.

- **Cambodia:**
  - Two key revisions proposed in the legislation for slaughterhouses to reduce the risk of transmission and zoonotic spread of disease.

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These maps are based on UN map no. 4170 rev. 17 February 2019

Report developed on gender roles in poultry value chains in the project components.
Making progress towards gender equality

Rapid Assessment of gender roles in poultry value chains conducted in the four project countries.

A group of women vendors/slaughterers is providing inputs into the planning and design of a new live bird market in Takeo, Cambodia.

Participation of Lao Women’s Union in improving biosecurity along the value chain in Lao People’s Democratic Republic.

Small-scale farms and gender analysis in bio-security activities and poultry production in Bac Giang, Viet Nam.

Project impacts

01 Generated more engagement and ownership from the ASEAN regional economic community for control of avian influenza and other zoonoses to enable a sustainable approach for disease control.

02 Strengthened health security in the region by building capacities for epidemiology and laboratory using a One Health approach. Supported GHSA coordination between Detect 1 (Laboratory Systems) & Detect 5 (Workforce Development).

03 Promoted epidemiology capacity development for evidence-based decision-making through the leadership role played by R-FETPV graduates in the region.

04 Created an enabling environment for networking and information sharing at regional level.

05 Improved understanding of risk factors related to livestock distribution and production in the region for strategic foresight to manage the risk of zoonotic disease emergence and spread.

Engagement, ownership and sustainability for avian influenza and other zoonoses

Promoting ASEAN level mechanisms

One Health

Tripartite

Collaboration

GHSA

Detect 1

Detect 5

Health Security

ASEAN

AIGA

ACCAHZ

ALDF

AVEG

ASEAN Epidemiology Network

- ASEAN Veterinary Epidemiology Group (AVEG)

ASEAN Laboratory Networks

- ASEAN Laboratory Directors Forum (ALDF)
- ASEAN Laboratory Technical Advisory Group (Lab-TAG)

ISVEE

- International Symposium for Veterinary Epidemiology and Economics

ICOMOS

- International Conference on One Medicine System One Science

Building networks

Information sharing
Country work and success stories

Key highlights

Situation so far – Luangprabang has experienced repeated outbreaks of HPAI in the past due to introduction of poultry from neighbouring high-risk areas, imported to meet high local demand.

What we do – The project aims to improve poultry health and management using a community based approach, to improve the self-sufficiency of farmers as the local poultry production is unable to meet the demand.

Project implemented in three high-risk villages in Luangprabang Province.

Model farms for poultry flock health management and good practices at household level have been established in three villages.

A poultry health centre has been established at the National Agriculture and Forestry College in Luangprabang to provide training to farmers on day-to-day management of poultry production.

Farmer groups have been established in three villages with around 50 farmers being a part of it. These farmers have made improvements in their farms and have learned good practices.

Technical exchange and support for chicken health and farm management are provided to farmers in collaboration with the Department of Livestock Development, and Sakon Nakhon Provincial Livestock Office, Thailand.

Village veterinary workers were established in three villages and trained to monitor production and health statuses, and to offer veterinary services at the village level.

Technical support provided to the Lao Women’s Union of Luangprabang for processing and cooking ‘Luangprabang Native Chicken’ for sustainable economic incentives.
**Key highlights**

**Situation so far** – Since 2007, multiple strains of HPAI virus have entered Myanmar and caused reported outbreaks.

**What we do** – The project has supported the management and reduction of AI through policy changes and through better biosecurity practices.

The project supports management and reduction of AI risk through better poultry production practices in the Yangon Poultry Production Zone and at the national level.

'A table-top outbreak simulation exercise on zoonotic H7N9 HPAI' and the Myanmar AI Vaccination Policy Workshop were held in September 2018.

The integrated AI contingency plan is still in review within the Livestock Breeding and Veterinary Department (LBVD). FAO will support its translation, printing and dissemination after approval.

A gender specialist visited the Yangon Poultry Production Zone in April 2019 and conducted a rapid assessment of the role of gender in the poultry value chain in Yangon PPZ, which will provide a knowledge base for future programmes.

A bespoke third-party certification is being developed in collaboration with the Myanmar Organic Agriculture Group (MOAG) for farms that produce eggs without antibiotics.

Evidence for H9N2 avian influenza prevalence in Myanmar generated to influence change in policy. LBVD has requested permission from the Ministry of Agriculture, Livestock and Irrigation to allow H9N2 vaccination in Myanmar. The LBVD risk communication strategy has been finalized and will be translated and published in the Myanmar language.

Antibiotic residue testing in eggs has been initiated in collaboration with the Yangon Veterinary Assay Laboratory

Public-private partnership promoted – Farmers of the ‘Healthy Egg Production Group’ involved with the supermarket chain ‘City Mart Holding Limited’ to sell the poultry eggs tested by LBVD and certified by MOAG. The project supported the testing of antibiotic residues in eggs conducted by LBVD.
**Key highlights**

**Situation so far** – The current legislation to support the auditing of veterinary hygiene conditions is not suitable for small-scale levels. This results in each province using different standards and certifications.

**What we do** – A multi-stakeholder approach through collaboration among FAO, the Department of Livestock Production (DLP) and local authorities has been adopted to harmonize hatcheries and small parent flock biosecurity auditing and certification.

Training on auditing of small-scale farms has been provided to the local authorities, and the Bac Giang sub-DLP will audit and certify farms.

Trained provincial auditors have audited 50 hatcheries in Bac Giang Province to measure the impact of biosecurity interventions, with 45/50 hatcheries passing and becoming certified.

Certification will allow transport of safe poultry across provinces, reducing the risk of disease transmission.

A harmonized auditing and certification scheme will be included in national legislation to facilitate nationwide implementation.

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**Situation so far** – Takeo province has experienced repeated outbreaks of HPAI in the past due to frequent cross-border movements of people, poultry and poultry products.

**What we do** – The project aims to support biosecurity and biosafety improvement of Takeo live bird market and its poultry value chain.

Public-private partnership for biosecurity improvements of live bird markets.

The project aims to support biosecurity and biosafety improvement of Takeo live bird market and its poultry value chain.

Bolstered efforts to restructure the market to include good practices for safe sale and slaughter of poultry.

Two key revisions have been proposed for legislation:

1. Poultry shall be contained for at least two hours before slaughter for health inspection
2. Ban on force-feeding of poultry

Multi-stakeholder approach that includes government and local authorities, local vendors, and traders.

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Conclusions and way forward

The project has helped target countries in ASEAN to prevent and control the emergence and spread of avian influenza and other zoonotic diseases, as well as to minimize its impacts at national and regional levels. It has been instrumental in getting governments to focus on risk-reduction strategies and has led to important policy changes in project countries. The project has included approaches to community, private sector and gender equality, and has engaged local authorities in risk management activities to ensure long term ownership. Moreover, capacity building of local partners has been the aim in several of the project activities and efforts have been made to ensure knowledge transfer and long-term sustainability of capacity.

I. Knowledge and experience sharing

Key achievements at the country level that will be shared include:

- Community-based enterprises for flock health management in Lao People’s Democratic Republic.
- Evidence for Policy change for H9 vaccination in Myanmar.
- Improvement in operation of live bird markets in Cambodia.
- The hatchery certification in Bac Giang, Viet Nam.

The good practices from the pilot risk mitigation strategies will continue to be shared at relevant regional platforms for adaptation and adoption by other countries to support risk reduction in the ASEAN region for avian influenza and other zoonotic diseases.

II. Advocacy and policy-making

The evidence from the pilot countries on various risk-mitigation interventions will continue to be used at regional forums, such as AIGA, for advocacy as well as policy adoption in the ASEAN region for building resilience and risk reduction.
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