R-FETPV 1ˢᵗ Module 2022 Announcement

Basic Epidemiology and Surveillance Data Analysis

9 June – 28 July, 2022

1.   Background

The appearance of Highly Pathogenic Avian Influenza (HPAI), Nipah Virus and Severe Acute Respiratory Syndrome (SARS) has clearly demonstrated shortcomings in the ability to rapidly detect, report, and respond to such emerging diseases in Southeast Asia, due to lack of human capacity. The Field Epidemiology Training Program (FETP) is a globally recognized long-term field epidemiology program developed by the public health sector. This two-year training course provides training to support outbreak investigations, analysis of surveillance data, field research and provision of practical recommendations for decision makers. Most importantly, the FETP model also promotes the concept of "training by providing services". With successful stories of FETP in public health, Department of Livestock Development, Thailand (DLD) is currently partnering with the Department of Disease Control (DDC), with strong support from US Center for Disease Control (US-CDC) Food and Agriculture Organization of the United Nations (FAO) and United States Agency for International Development (USAID), to develop the program similar to FETP for veterinarians, named "Field Epidemiology Training Program for Veterinarian, FETPV".

FETPV would like to extend the benefits of this program to animal health authorities and other related organizations from other countries in the region by organizing few training courses for the FETPV 1ˢᵗ Module 2022 entitled ***Basic Epidemiology and Surveillance Data Analysis*** beginning with Joint June Course for medical doctor, public health personnel and veterinarians, called *"Introductory course on epidemiology and biostatistics"*. The ***Basic Epidemiology and Surveillance Data Analysis Module*** intends to be the first block of new revised long-term FETPV which has been adjusted to be block-module courses.

FETPV is pleased to announce that *"**Basic Epidemiology and Surveillance Data Analysis Module**"* will be held during 9 June – 28 July 2022 at FETP in Nonthaburi, and FETPV in Bangkok, Thailand. This module is aimed to provide basic knowledge in epidemiology and biostatistics as well as field epidemiological applications focusing on effective animal disease surveillance data analysis.

2.   Objectives

1) To provide to participants with basic epidemiology and biostatistics as well as field epidemiological applications focusing on the following activities
   - Principles and concepts of field epidemiology to disease prevention and control
   - Design and assess disease surveillance and networks using multi-level and multi-disciplinary approaches.
   - Experience participants to the philosophy of "learning by providing services" by encouraging participants to assess of animal health situation analysis i.e. animal diseases and animal health problem in their responsible area.

- Encourage participants to share their information by presenting the output from the animal health situation analysis assignment.

2) To select participants of the first module for further opportunity to continue the second modules, outbreak investigation and field epidemiology study.

3.   Target participants and requirement

Each country should nominate maximum of 2 persons. Maximum of 8 candidates from all countries will be selected for the course by the course organizing joint committees. **All applicants have to submit on-line application form with one-page draft proposal for animal health situation/surveillance data analysis (Annex 1, and 2) base on #24 in application form.**

- Participant for the course will be selected according to the following criteria:
- Age between 25 – 45 years old
- Hold at least a Bachelor Degree in Veterinary Medicine or equivalence
- Have at least 2 years working experiences in epidemiology or related fields
- His/her current assignments in an institution
- Past experiences
- Country's specific criteria identified in a previous needs assessment conducted by FAO
- Recommendation from his/her superior at the national government
- Proof of adequate proficiency in English (e.g. if available, internally accepted test score, or certification of English lessons)
- Adequate computer skill on basic program such as Excel etc.
- Willingness of the government agency to dedicate the trainee to epidemiology duties and continue periodic epidemiology workshop

Only applicants who have submitted on-line application form with one-page draft proposal for animal health situation/surveillance data analysis base on #24 in application form will be considered as course candidates. Once nominees are selected, FAO may provide funding to support English language training for each participant in their home country prior to the workshop as appropriate for individual case.

4.   Course methodology

Three training courses including 1) Introductory course on epidemiology and biostatistics, and 2) Unraveling Surveillance Data Workshop on surveillance data analysis 3) Epi-Info workshop will be organized, respectively.

Courses will support the following approach to learning:
- Necessary theoretical knowledge and concepts using a problem-oriented approach that stresses critical reasoning
- Practicing exercises to reinforce knowledge, concepts and critical reasoning
- Apply knowledge in simulations based on actual field case studies
- Introducing multi-disciplinary approach in all level activities

During training period, participants have to finalize the proposal for animal health situation analysis. All participants will give presentation on the result of preliminary analysis of their own dataset. Participants who are able to finish the written final report of animal health situation analysis by the end of September 2022 will be invited to give the presentation and have a potentially to further join the second module.

5.   Course organizers

-    Field Epidemiology Training Program for Veterinarian (FETPV), Department of Livestock Development, Ministry of Agriculture and Cooperatives, Thailand (main organizer)
-    Field Epidemiology Training Program (FETP), Department of Disease Control, Ministry of Public Health, Thailand
-    Food and Agriculture Organization of the United Nations
-    Thai Universities

6.   Course fee

-    The Organizer will provide the round economy airfare, daily allowance as well as the local accommodation and transportation for all participants.
-    The participants are responsible for application fee for visa.

7.   Application for admission

Applicant shall to fill in the on-line application form at http://tiny.cc/8ofmuz as well as email the duly accomplished application form to: dld.fetpv@gmail.com, sith.prem@gmail.com, and Adrian.Coghill@fao.org

Deadline for application submission is on 14 February 2022. An applicant must be nominated by the Chief Veterinary Officer. The application form is attached herewith as annex 3.

8.   Timeline for selection process

Activities	Due date
- *Application submission*	*14 February 2022*
- *Interviewing applicants*	*1– 4 March 2022*
- *Candidate selection*	*15 March 2022*
- *Sending the letter of acceptance to FAORAP*	*31 March 2022*
- *First visit to join Introductory course on epidemiology and biostatistics and other related courses*	*9 June – 28 July 2022*
o Orientation and presentation on proposal of animal health/disease situation analysis (10 June 2022)	
o Joint Introductory Course on Field Epidemiology and Biostatistics (13 June – 8 July 2022)	
o Health Situation/Surveillance Data Analysis Proposal	

Activities	Due date
Development (11-12 July 2022)	
o Basic spatial distribution using QGIS Workshop (18 – 20 July 2022)	
o Basic Data Analysis and Epi-Info Workshop (21,22,25,26 July 2022))	
o Health Situation/Surveillance Data Analysis Proposal Presentation (27 July 2022)	
- ***Second visit to present result of Animal health situation and join outbreak demonstration workshop under the second module***	*October 2022*

Contact detail

For further information, please contact

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Dr. Dejyong, Tosapol (FAORAP, ECTAD: Email: Tosapol.Dejyong@fao.org,

<div align="right">**Annex 1**</div>

Concept Note for Animal Health Situation/Disease Surveillance Data Analysis

Often, information/data from any surveys and surveillance systems that aim to address specific questions related to animal health/disease exist but the data has not yet been used to describe and analyze the occurrence of animal diseases at a population level. Such information can be useful in measuring the temporal and spatial distribution of disease, assessing disease trends and variability, prevalence, the preliminary assessment of possible risk factors. Surveillance data analysis can be useful in formulating disease control and prevention measures, including providing recommendations to further improve the current surveillance system.

<u>Objectives:</u>

1. To provide experience to trainees on how to analyze **existing data and information** animal health and disease from surveys and the surveillance system of in appropriated systematic way and to give recommendations base on their findings.
2. To promote concept of Field Epidemiology Training Program, which includes *Learning by Providing Services*, and to encourage trainees to use data from their organization and use the results of their study to improve the level of service provided by their organization.

<u>Activities:</u>

Follow a systematic method to conduct the situation analysis including the following steps in project management:

- Define the specific disease issue that is important to their organization which requires analysis;

- Define the objective(s) of the study;

- Define the scope of the study and the data required ;

- Identify data sources and resource persons;

- Identify materials and resources need to support travel, data;

- Develop a timeline and budget to manage the project;

- Collect necessary data;

- Conduct necessary field visits to gain a better understanding of the existing system or to collect or validate previously collected data;

- Conduct a critical review of existing data including assessing data quality prior to analysis;

- Apply descriptive and analytical statistical methods learned in the introductory course;

- Interpret findings and make recommendations to decision makers in their organizations based on findings and conclusions.

- Write a report that includes: Introduction, Methods, Results, Conclusions including Limitations and Recommendations;;

- Produce a written report with practical recommendations to relevant stakeholders for further action;

- Present findings for review to advisers and finalize the report;

- Prepare an oral presentation based on acceptance of final approved written reports.

Annex 2

Spatio-temporal distribution of rabies in dogs and cats in Thailand, 2015 – 2016

Introduction

Rabies is concerned as an important zoonotic disease, that cause 100 percentages of case fatality. All of human rabies cases were transmitted by rabid animals while the transmission from human to human is very rare that was only reported in case of corneal transplant (Houff et al., 1979). There were 37 human rabies cases reported in Thailand during 2012 to 2016, dogs were reported as the main carrier (Bureau of Epidemiology, Department of Disease Control, 2016) as well as the report of the high number of post-exposure prophylaxis for rabies in human which were bitten by suspected rabid animals (Bureau of general communicable Diseases, Department of Disease Control, 2017). The way to reduce the risk of rabies in humans is the control of rabies in animals. Although the department of livestock development and municipalities have interrupted circulation of the rabies virus in dogs and cats with appropriate control such as vaccination and castration, endemic areas still persist in several parts of Thailand. In addition, the new group of rabies virus base on genetic characterization was detected in the border area of Thailand, Myanmar and Laos PDR in the northern and upper northeastern regions of Thailand, indicating that spatial analysis is crucial for rabies control (Thapanagulsak et al., 2016). Therefore, defining a risk area by analyzing the potential associating factors base on epidemiological study, and using statistical geographic information to calculate and identify the clusters of the rabies outbreak at different time points, can be clearly explored the target areas to enhance the effectiveness of disease control (Suzuki et al., 2007).

In Thailand, during 2006 - 2011, rabies outbreaks in animals were most common in central, eastern and southern regions, respectively (Yuenyongolan, 2012). In the lower northeastern region study, the result show that sub-district which share borders with neighboring countries significantly more likely to be found rabies case than other area (Puyati et al., 2014). Moreover, the spatial distribution of rabies cases can be shown in the database of rabies surveillance in Thailand (Bureau of disease control and veterinary service, Department of livestock development, 2017). However, the previous studies did not use GIS technology and statistical principles to identify the risk areas. Therefore, the area of rabies outbreak might not be exactly explored. The analysis by using GIS technology and statistical principle to identify the risk area and their potential associating factors in can be clearly explored the target areas to enhance the effectiveness of disease control.

Objectives

1. To describe spatio-temporal distribution of animal rabies cases in Thailand during 2015 – 2016.
2. To identify risk area in sub-district level and potential associating factors of rabies cases in dogs and cats.

Methods

Study design
Ecology cross sectional study.
Data source

Collect data from the animal rabies surveillance information system database (www.thairabies.net) which included animal type, age, clinical signs, vaccination history, location, and laboratory results by direct Fluorescent Antibody (dFA) test, that were entered by National Institute of Animal Health, Regional Veterinary Research and Development Center, Office of livestock region, Provincial livestock office and Queen Saovabha Memorial Institute. The data for potential associating factors analysis will be collected from Department Of Provincial Administration (coordinates of border area), Department of Highways (coordinates of highway road), Department of livestock development (Coordinates of rabies diagnostic laboratory), National statistical office (Human population density).

Analysis

Collect data of dogs and cats between 2015 and 2016 from the thairabies.net database. The unit of analysis is subdistrict and the potential associating factors in this study are Border area, Highway, Distance to the laboratory, Human population density, Previous history of rabies cases.

For spatial analysis, the polygon area at subdistrict level will be used. In case of point is needed for analysis, the coordinates at the point at the center of sub-district which will be created by using centroid, A centroid is a geometric center of a polygon which are used to display a point on the center of a polygon (shape).

Calculate the Odds ratio (OR) by using logistic regression in R software, among potential associating factors and risk area, the definition of the risk area is subdistrict with rabies case while non-risk is subdistrict without rabies case.

Expected outcomes

1. The magnitude and dynamics of rabies occurrences in animal population is seasonal demonstrated in space and time.

2. The risk area and associated factors of animal rabies cases in Thailand between 2015 and 2016 are annually identified in sub-district level.

3. The integration of study results provide the information to support rabies elimination strategy plan in Thailand.

Timeline

Working plan	Processing period			
	Jul	**Aug**	**Sep**	**Oct**
1. Finalize the project proposal	←→			
2. Literature review	←——→			
3. Compile all data/docs	←——→			
4. Data entry and verify data	←——→			
5. Data Analysis		←——→		
6. Writing report and submit the report		←——→		
7. Presentation				←→

Possible limitation

1. Missing data from animal rabies surveillance database system.
2. Cluster analysis by using statistic is complicated, then the high performance computer is needed to perform.

References

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First Module Application Form

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Photo	**Please email the duly accomplished application form to:**
	dld.rfetpv@dld.go.th
	dld.fetpv@gmail.com
	sith.prem@gmail.com
	Adrian.Coghill@fao.org
	Tosapol.Dejyong@fao.org
	before 14 February 2022

Application Date

DD	MM	YYYY

1. FULL NAME *(to be used in the workshop certificate)*

First Name	Middle Name	Last Name

3. NATIONALITY **4. GENDER** **5. BIRTH DATE** **6. AGE** **7. MARITAL STATUS**

3. NATIONALITY	4. GENDER	5. BIRTH DATE	6. AGE	7. MARITAL STATUS
	[ ] Female [ ] Male [ ] Prefer not to say	[dd.mm.yy]		[ ] Single [ ] Married [ ] Others

8. ORGANIZATION INFORMATION

Position/Title:

Organization Name:

Organization Address:

Country:

9. CONTACT INFO (Work)

Tel:

Fax:

Mobile:

Email:

10. HOME ADDRESS

11. CONTACT INFO (Personal)

Tel:

Email:

Skype ID:
(Necessary for interviewing during 15-19 February 2021)

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12. EMERGENCY CONTACT INFORMATION

(name and address of person to contact in case of emergency)
Relationship:
Tel:

13. ENGLISH LANGUAGE PROFICIENCY

E – Excellent; **G** – Good; **F** – Fair *(note: proficiency in English is essential)*		
READ	**WRITE**	**SPEAK**
E　**G**　**F** [ ]　[ ]　[ ]	**E**　**G**　**F** [ ]　[ ]　[ ]	**E**　**G**　**F** [ ]　[ ]　[ ]

14. ARE YOU FAMILIAR WITH THE USE OF PERSONAL COMPUTER?

[ ] Yes	[ ] No
Please describe computer program (word, excel, access, epidemiological program, etc.) that you are able to use: Word, excel	

15. EDUCATION

Start with the most recent institution attended. Please use additional sheet when necessary			
Institution	Years attended	Major field of study	Degree

16. EMPLOYMENT

Start with the most recent institution employed. Please use additional sheet when necessary			
Position/Title	Organization	Period (from- to)	Responsibilities

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17. MEMBERSHIP TO PROFESSIONAL SOCIETIES*

18. GIVE A BRIEF DESCRIPTION OF YOUR PRESENT JOB IN EPIDEMIOLOGY-RELATED RESPONSIBILITIES*

19. PREVIOUS INVOLVEMENT IN FIELD EPIDEMIOLOGY- RELATED EXPERIENCE*

20. SPECIAL INTERESTS IN THE FIELD OF EPIDEMIOLOGY*

*Please use additional sheet when necessary

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21. PREVIOUS WORKSHOP(s) ON EPIDEMIOLOGY AND RELATED SUBJECTS ATTENDED*

International *(give name of course(s), duration and dates)*
In your country *(give name of course(s), duration and dates)*

22. PREVIOUS INTERNATIONAL TRAVEL ON TRAINING, WORKSHOP, SEMINARS, STUDY TOURS, ETC.*

23. DESCRIBE THE PRACTICAL USE YOU WILL MAKE OF THIS WORKSHOP ON YOUR RETURN HOME IN RELATION TO THE RESPONSIBILITY YOU EXPECT TO ASSUME*

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24. PROPOSAL FOR ANIMAL HEALTH SITUATION ANALYSIS (Please read the concept paper for animal health situation analysis and example of proposal in annex 1, and 2 in the course announcement)

TITLE:

BACKGROUND:

OBJECTIVE:

REQUIRED DATA AND DATA SOURCE:

METHODOLOGY:

EXPECTED OUTCOME:

PRINCIPLE INVESTIGATOR AND COLLEAGUES:

POSSIBLE LIMITATION:

REFERENCE:

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* Please use additional sheet when necessary

25. ARE YOU IN GOOD HEALTH?

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Accepted participants will be responsible for any medical expenses they may incur while in Thailand and should consider arranging insurance before joining the workshop; Workshop Organizers will not be responsible for any medical expenses during the training.
[ ] Yes   [ ] No

26. ARE YOU A SMOKER?

[ ] Yes   [ ] No

27. DECLARATION

I certify that the above statements are true and accurate to the best of my knowledge. If selected, I undertake to:

a. Agree to join FETPV modular training program (if was selected) or participate in any follow up activities after this training course
b. Spend all my time during the period of the training course.
c. Return to my home country or workplace at the end of the fellowship.
d. Be fully responsible for any medical expenses while undergoing training.

SIGNATURE OF APPLICANT	**DATE**

SIGNATURE OF **CHIEF VETERINARY OFFICER** **(or chief of the organization, for Thai applicant)**	**DATE**