

# WOAH Collaborative Centre Reports Activities 2022

## Activities in 2022

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### Centre Information

<b>Title of WOA Collaborating Centre</b>	Veterinary Services Capacity Building (Asia, the Far East and Oceania)
<b>Address of WOA Collaborating Centre</b>	Veterinary Public Health and Food Safety Centre for Asia Pacific (VPHCAP), Faculty of Veterinary Medicine, Chiang Mai University, Mae Hia, Muang, Chiang Mai 50100 THAILAND
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<b>Name Director of Institute (Responsible Official):</b>	Director-General of Department of Livestock Development, Thailand 69/1 Phayathai Road , Ratchathewi , Bangkok 10400 THAILAND Dean of Faculty of Veterinary Medicine, Chiang Mai University, Mae Hia, Muang, Chiang Mai 50100 THAILAND
<b>Name (including Title and Position) of Head of the Collaborating Centre (WOAH Contact Point):</b>	Asst.Prof.Dr.Warangkhana Chaisowwong, Director of OIE Collaborating Centres, Faculty of Veterinary Medicine, Chiang Mai University Dr. Watcharapon Chotiyatutta, Director of Division of International Livestock Cooperation, Department of Livestock Development, Bangkok, THAILAND
<b>Name of the writer:</b>	Ms.Thanaporn Kunkong

### TOR1 AND 2: SERVICES PROVIDED

1. Activities as a centre of research, expertise, standardisation and dissemination of techniques within the remit of the mandate given by WOA

Epidemiology, surveillance, risk assessment & Zoonoses	
Title of activity	Scope
	The project aims to encourage the community to solve the problem of homeless dogs by reducing the overpopulation of

<p>Sustainable and Participatory Community-Based Management of Free Roaming Dog Problems in Public Locations(Ma-CM)</p>	<p>street dogs through sterilization, Improving the health status of homeless dogs through vaccinations especially rabies vaccination and coordinating medical care in cooperation with our veterinary team through community participation. Rabies is a serious zoonotic disease in Thailand and SE Asia region. This project supports rabies control program by education, vaccination, and reduction of stray dog population.</p>
<p>Epidemiology, surveillance, risk assessment,</p>	
<p>Title of activity</p>	<p>Scope</p>
<p>Prevalence of Methicillin Resistance Staphylococcus aureus in dairy farms: A Systematic Review and Meta-Analysis</p>	<p>The purpose of this study is to use a systematic review to establish the overall prevalence of Methicillin-resistant Staphylococcus aureus in dairy farms around the world. The collected data will be subjected to meta-analysis in order to determine the pooled prevalence of MRSA and the heterogeneity of that prevalence in a dairy farm. The findings of this study will aid researchers in addressing a difficulty in primary research that should be addressed in future studies, as well as produce or assess theories about MRSA prevalence and epidemiology in general.</p>
<p>Epidemiology, surveillance, risk assessment,</p>	
<p>Title of activity</p>	<p>Scope</p>
<p>Spatiotemporal Epidemiology of Dog-Mediated Rabies in Nepal During 2005-2017</p>	<p>(On-going research) This project aims to determine the high-risk areas for animal rabies in Nepal and show the trend of the outbreak occurring in Nepal. Results from the project can be used by all the stakeholders involved with rabies prevention and control in Nepal to focus and develop control measures specific to the area under consideration.</p>
<p>Epidemiology, surveillance, risk assessment,</p>	
<p>Title of activity</p>	<p>Scope</p>
<p>Lumpy skin disease outbreaks in Africa, Europe, and Asia (2005-2022): Multiple change point analysis and time series forecast(On-going research) This study aims to determine the trends and change points in the LSD outbreaks reports from Africa, Europe and Asia and also forecast the LSD outbreaks in respective regions. Results will provide authorities with useful information that can be incorporated into strategies to monitor and prevent future LSD outbreaks. If interventions are made properly it is likely to get fewer reports than expected.</p>	<p>(On-going research) This study aims to determine the trends and change points in the LSD outbreaks reports from Africa, Europe and Asia and also forecast the LSD outbreaks in respective regions. Results will provide authorities with useful information that can be incorporated into strategies to monitor and prevent future LSD outbreaks. If interventions are made properly it is likely to get fewer reports than expected.</p>
<p>Training, capacity building</p>	
<p>Title of activity</p>	<p>Scope</p>
<p>Risk Analysis Workshop</p>	<p>The workshop shows the working principle for risk analysis, guidelines for risk managers, risk assessor and risk communicator related to standards or requirements on food safety and health issues.</p>

Training, capacity building

Title of activity	Scope
Strengthening of veterinary service capacity to assure the quality system in food safety	The workshop explains the role of veterinary services and aims to increase the skills and experience for veterinarians to control the quality of food production and food safety.

Training, capacity building

Title of activity	Scope
Food Safety and Security from Animal Origin: Strengthening the Network for Sustainability	The aims of conducting the course are to develop and exchange knowledge and skill on food production, food safety in food chain, surveillance and monitor safety in food as well as international food regulations through the training course that provides participants to gain knowledge and experience from lectures, practices, and field visits. The course will be beneficial for food security challenge which has complexity and require multidimensional understanding including academic knowledge as well as socio-economic.

Training, capacity building

Title of activity	Scope
Update on control measures and international regulations for pathogens in poultry production	The aim of the seminar is to recognize the importance of international control measures and regulations for pathogens in poultry production.

Training, capacity building

Title of activity	Scope
How to make a good research and get to get published your first paper?	The workshop provides an idea and methods of good research paper and the way to getting research paper published.

Food Safety

Title of activity	Scope
food safety and quality in university and surrounding areas using integrated multidisciplinary approach (Food Safety CMU)	<p>The Food Safety project is a project that promotes the Sustainable Development Goals (SDGs), also known as the Global Goals, to end hunger and promote good health and well-being. The project is developed in the university and aimed to promote safe of food for students and university. personnel.</p> <p>This project aims to 1) create food safety in Chiang Mai University (CMU) 2) promote the consumption of safe food in CMU and 3) increase awareness and participation in food safety for students, staff, and safe food distribution of restaurant operators in CMU.</p>

Food Safety

Title of activity	Scope
Project for Agriculture and Livestock Raw Materials Management Center (Food HUB CMU)	This project aims to establish the centre for arrangement the agriculture and livestock products to create the food safety system in Chiang Mai University (CMU)

Food Safety

Title of activity	Scope
Prevalence of Extended-Spectrum $\beta$ -Lactamase-Producing Escherichia Coli in Broiler: A Systematic Review and Meta-Analysis	This study aims to investigate prevalence of ESBL-producing E. coli in broiler farms from various parts of the world. The gleaned data will then perform meta-analysis to estimate pool prevalence and assess heterogeneity of the prevalence.

Food Safety

Title of activity	Scope
Prevalence and Molecular Characteristics of Extended Spectrum $\beta$ -lactamase (ESBL) Producing Escherichia coli Isolated from Broiler in Indonesia	(On-going research) This study aims to investigate ESBL phenotypea and genotypes (blaCTX-M, blaCTX-M-1, blaCTXM-9, bla TEM, bla SHV and bla OXA genes) and determine the phylogenetic groups among ESBL positive isolates from broiler in Indonesia. Results from this research will give reference for Government and stakeholders to make strategy to prevent the spreading of ESBL from broiler to human. And it can use to make regulations about Good Hygiene Practices in food chain.

Food Safety

Title of activity	Scope
Project for Food Safety in Street Food, Chiang Mai University	This project aims to develop and improve the street food surrounding the university areas to engage the food safety for students, staffs, tourism, and local people.

Training, capacity building

Title of activity	Scope
Master of Science Program in Veterinary Public Health (International program)	The program aims to produce graduates from different countries to have all-round competency in Veterinary Public Health as well as create the international expertise networks such as zoonotic disease prevention and control, and food hygiene, with an emphasis on quality control and safety of food from animal-origin along the food production chain including environmental hygiene in region level. The curriculum encourages the student-centered atmosphere and concentrates on universal knowledge to resolve the problems in their own countries and region. The curriculum also emphasizes on students' local problem area to carry out research study which

will be supervised by professors and experts from Thailand and other collaborative countries. The research strengthens students to practice systematic manner by using Veterinary Public Health discipline in order to further develop the new body of knowledge.

## TOR3: HARMONISATION OF STANDARDS

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the main focus area for which you were designated

Proposal title	Scope/Content	Applicable area

4. Did your Collaborating Centre maintain a network with other WOAHC Collaborating Centres (CC), Reference Laboratories (RL), or organisations designated for the same specialty, to coordinate scientific and technical studies?

Yes

Name of OIE CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
Ecole interne de VetAgro Sup Ecole nationale des Services vétérinaires	Marcy-l'Etoile, FRANCE	Europe	Development of E-learning Modules on Leadership in Veterinary Services
Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale"	Teramo, ITALY	Europe	Development of E-learning Modules on Leadership in Veterinary Services
Centre National de Veille Zoosanitaire (CNVZ)	Tunis, TUNISIE	Africa	Development of E-learning Modules on Leadership in Veterinary Services
Center for Animal Health and Food Safety (CAHFS)	Minnesota, USA	Americas	Development of E-learning Modules on Leadership in Veterinary Services

## TOR4 AND 5: NETWORKING AND COLLABORATION

5. Did your Collaborating Centre maintain a network with other WOAAH Collaborating Centres, Reference laboratories, or organisations in other disciplines, to coordinate scientific and technical studies?

Yes

Name of OIE CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
Reference Laboratory for Brucellosis (Brucella abortus)/ National Institute of Animal Health	Thailand	Asia and Pasific	Training on Laboratory Practical

## TOR6: EXPERT CONSULTANTS

6. Did your Collaborating Centre place expert consultants at the disposal of WOAAH?

No

## TOR7: SCIENTIFIC AND TECHNICAL TRAINING

7. Did your Collaborating Centre provide advice/services to requests from Members in your main focus area?

No

8. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by WOAAH, to personnel from WOAAH Members?

Yes

a) Technical visit : 0

b) Seminars : 1

c) Hands-on training courses: 5

d) Internships (>1 month) :

TYPE OF TECHNICAL TRAINING PROVIDED (A, B, C OR D)	CONTENT	COUNTRY OF ORIGIN OF THE EXPERT(S) PROVIDED WITH TRAINING	NO. PARTICIPANTS FROM THE CORRESPONDING COUNTRY
C	Risk Analysis Workshop	Indonesia, Nepal, Thailand and Pakistan	4
C	Workshop on Strengthening of veterinary service capacity to assure the quality system in food safety	Cambodia, Indonesia, Nepal, and Pakistan	5
		Argentina, Azerbaijan, Belize, Bhutan, Colombia, Ecuador,	

C	International training course on Food Safety and Security from Animal Origin: Strengthening the Network for Sustainability	Kazakhstan, Kenya, Malawi, Maldives, Moçambique, Oman, Pakistan, Panama, Paraguay, Philippines, Somalia, South Africa, Sri Lanka, Thailand, Timor Leste, Turkey, Uganda, and Uzbekistan	78
B	Seminar on Update on control measures and international regulations for pathogens in poultry production	Belize, Cambodia, Germany, Indonesia, Malawi, Nepal, Pakistan, Sri Lanka, and Thailand	37
C	Workshop on How to make a good research and get to get published your first paper?	Cambodia, Indonesia, Nepal, Thailand and Pakistan	6
C	Master of Science Program in Veterinary Public Health (International program)	Indonesia, Nepal and Pakistan	3

## TOR8: SCIENTIFIC MEETINGS

9. Did your Collaborating Centre organise or participate in the organisation of scientific meetings related to your main focus area on behalf of WOA?H?

Yes

NATIONAL/INTERNATIONAL	TITLE OF EVENT	CO-ORGANISER	DATE (MM/YY)	LOCATION	NO. PARTICIPANTS
International	The OIE Sub-Regional Virtual Workshop on VPP Competencies and Trainings	Role; Participate main organizer: OIE SRR SEA team	2022-03-31	Online	30

## TOR9: DATA AND INFORMATION DISSEMINATION

10. Publication and dissemination of any information within the remit of the mandate given by WOA?H that may be useful to Members of WOA?H

a) Articles published in peer-reviewed journals:

8

1. Jainonthee, C., Chaisowwong, W., Ngamsanga, P., Wiratsudakul, A., Meeyam, T., & Pichpol, D. (2022). A Cutoff Determination of Real-Time Loop-Mediated Isothermal Amplification (LAMP) for End-Point Detection of *Campylobacter jejuni* in Chicken Meat. *Vet Sci*, 9(3). doi:10.3390/vetsci9030122

2. Singhla, T., & Boonyayatra, S. (2022). Prevalence, Risk Factors, and Diagnostic Efficacy of Bovine Tuberculosis in Slaughtered Animals at the Chiang Mai Municipal Abattoir, Thailand. *Front Vet Sci*, 9, 846423. doi:10.3389/fvets.2022.846423

3. Klaharn, K., Pichpol, D., Meeyam, T., Harintharanon, T., Loha-anukul, P., & Punyapornwithaya, V. (2022). Bacterial contamination of chicken meat in slaughterhouses and the associated risk factors: A nationwide study in Thailand. *PLoS One*, 17(6), e0269416. doi:10.1371/journal.pone.0269416

4. Sammanee, P., Ngamsanga, P., Jainonthee, C., Chupia, V., Sawangrat, C., Kerdjana, W., Pichpol, D. (2022). Decontamination of Pathogenic and Spoilage Bacteria on Pork and Chicken Meat by Liquid Plasma Immersion. *Foods*, 11(12). doi:10.3390/foods11121743

5. Jainonthee, C., Dang-Xuan, S., Nguyen-Viet, H., Unger, F., & Chaisowwong, W. (2022). Impacts of the Pandemic, Animal Source Food Retailers' and Consumers' Knowledge and Attitudes toward COVID-19, and Their Food Safety Practices in Chiang Mai, Thailand. *Int J Environ Res Public Health*, 19(16). doi:10.3390/ijerph191610187
6. Punyapornwithaya V, Seesupa S, Phuykhamsingha S, Arjkumpa O, Sansamur C and Jarassaeng C (2022) Spatio-temporal patterns of lumpy skin disease outbreaks in dairy farms in northeastern Thailand. *Front. Vet. Sci.* 9:957306. doi: 10.3389/fvets.2022.957306
7. Singhla T, Boonsri K, Kreausukon K, Modethed W, Pringproa K, Sthitmatee N, Punyapornwithaya V, Vinitchaikul P. Molecular Characterization and Phylogenetic Analysis of Lumpy Skin Disease Virus Collected from Outbreaks in Northern Thailand in 2021. *Vet Sci.* 2022 Apr 18;9(4):194. doi: 10.3390/vetsci9040194. PMID: 35448692; PMCID: PMC9025784.
8. Arjkumpa O, Suwannaboon M, Boonrod M, Punyawan I, Liangchaisiri S, Laobannue P, Lapchareonwong C, Sansri C, Kuatako N, Panyasomboonying P, Uttarak P, Buamithup N, Sansamur C and Punyapornwithaya V (2022) The First Lumpy Skin Disease Outbreak in Thailand (2021): Epidemiological Features and Spatio-Temporal Analysis. *Front. Vet. Sci.* 8:799065. doi: 10.3389/fvets.2021.799065

b) International conferences:

c) National conferences:

d) Other (Provide website address or link to appropriate information):

11. What have you done in the past year to advance your area of focus, e.g. updated technology?

12. Additional comments regarding your report: