World Organisation for Animal Health

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WOAH Collaborative Centre Reports Activities 2024

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CENTRE INFORMATION

***Title of WOAH Collaborating Centre**	Veterinary Services Capacity Building (Asia, the Far East and Oceania)
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***Name (including Title and Position) of Head of the Collaborating Centre (WOAH Contact Point):**	Asst.Prof.Dr.Warangkhana Chaisowwong, Director of Veterinary Public Health and Food Safety Centre for Asia Pacific, Chiang Mai, Thailand , Dr. Wanida Chaengprachak, Director of Division of International Livestock Cooperation, Department of Livestock Development, Bangkok
***Name of the writer:**	Ms.Thanaporn Kunkong

TOR 1 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 WOAH

Category	Title of activity	Scope
		The workshop shows an overview of

Disease control (true)	The workshop “Evaluation of the Global Health Project and preparation a plan to monitor Operation in Lao PDR” Under the Global Health Project in Laos	PODD application, a digital tool for reporting and tracking animal diseases from the local, district and provincial level in Lao PDR. The objective of this project to strengthen the development of international cooperation to support the community-based animal health surveillance systems, Promote the pilot project of implementing the customized PODD digital system in Lao PDR to support community-based animal health surveillance in the country. and support a disease surveillance system, awareness and support epidemic control in Lao PDR as a role model and learning resource for cooperation from communities and sectors involved in disease surveillance.
Epidemiology, surveillance, risk assessment, (true)	Path analysis of farmers Knowledge, Attitude and Practices towards Lumpy Skin Disease in Beef cattle. by Mr.Sohrab Khan	(On-going) The objective of this research project is to assess beef cattle farmers' Knowledge, Attitude and Practices (KAP) related to LSD and to explore how knowledge influences practices, how attitudes shape implementation, and how knowledge impacts attitudes towards LSD through path analysis. Lumpy skin disease (LSD) is one of the most severe poxvirus infections, caused by the Lumpy skin disease virus (LSDV), which belongs to the genus Capripoxvirus and family Poxviridae. LSD poses a significant threat to cattle populations and the livelihoods of farmers in Thailand. A total of 384 farmers provided data on their sociodemographic characteristics and responses to KAP-related questions. Path analysis was employed to examine how KAP components interact and how demographic factors influence these relationships. The analysis showed strong positive relationships between farmers' knowledge and attitudes (β =0.96, $p <$ 0.000), as well as between attitudes and practices (β =0.08, $p <$ 0.008). Farmers with more knowledge about LSD were more likely to adopt positive attitudes toward disease control and implement effective management practices. Additionally, knowledge had a direct influence on farmers' practices (β =0.38, p

		< 0.000), indicating that improved awareness of LSD is linked to better disease management. By strengthening knowledge, these efforts can positively influence attitudes and practices, leading to more effective control strategies. As the first KAP study on LSD in Thailand, this research highlights the critical role of targeted education programs in improving farmers' understanding of LSD. Ultimately, enhancing disease management through education can help reduce the economic impact of LSD on Thailand's livestock sector and promote sustainable farming practices.
Training, capacity building (true)	Food Safety Risk Assessment for Informal Value Chains Workshop	Food safety is an important component which ensure the safety of food produce from production to consumption for consumers. In collaboration with the ISAH 2024 will be jointly conducted together with the International Livestock Research Institute (ILRI), Veterinary Public Health and Food Safety Centre for Asia Pacific (VPHCAP), and Freie Universitaet Berlin (FUB) organize the pre-conference workshop, aims to strengthen capacity of relevant food safety authorities and researchers in low- and middle-income countries (LMICs) in food safety research and management. A two-day training will comprise different sections on food safety situation in LMICs, introduce risk analyses framework (risk assessment, risk communication and management) in food safety, and practice food safety risk assessments of selected food commodities and hazards from traditional (informal) value chains. The aim of this course is • Increase knowledge on the basics of hazards, risk assessment, management, and communication. • Practice qualitative/semi-quantitative risk assessments of prioritised hazards in selected food • Enable participants to become more familiar with different frameworks for risk assessment and to build national networks for implementation.

Food security (true)	Master of Sciences in Veterinary Public Health	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.
Epidemiology, surveillance, risk assessment, (true)	Risk Analysis in Veterinary Public Health Workshop (The coursework of Master of Sciences in Veterinary Public Health)	The workshop offers a comprehensive understanding of risk analysis principles, with a focus on risk assessment for livestock products and food safety. It covers key topics such as probability theory, statistical distributions, and the use of modeling and simulation techniques in quantitative risk assessment. Participants will also gain hands-on experience with risk analysis software, as well as learn about effective risk management strategies and communication techniques for conveying risk-related information.
		This conference conduct to present data from both domestic and international sources, exchange research experiences in areas related to animal production hygiene, infectious diseases and animal epidemics, zoonotic diseases, antimicrobial resistance, and food safety. The goal is to establish a collaborative network for One Health, emphasizing the

Training, capacity building (true)	The 21st International Society for Animal Hygiene (ISAH) Conference	importance of academic knowledge across various disciplines to promote animal production hygiene and sustainable livestock practices. This collaboration aims to strengthen international cooperation and contribute to the gathering of academic work related to humans, animals, and the environment, helping to discover and create useful interdisciplinary knowledge in global health. Additionally, the conference will include a workshop to share knowledge and exchange experiences related to public health veterinarians and food safety.
Training, capacity building (true)	Epidemiological Models for Animal and Human Diseases workshop	This workshop is designed to disseminate knowledge on statistical and mathematical modelling in epidemiology. It aims to provide valuable insights into how these models can be applied in education and research to address the challenges posed by emerging pathogens that impact both animal and human health. Additionally, the workshop seeks to foster a collaborative network of researchers, promoting knowledge exchange and laying the foundation for future partnerships.
Food security (true)	Food Safety Management Workshop (The coursework of Master of Sciences in Veterinary Public Health)	This workshop focuses on the essential aspects of food quality assurance systems, emphasizing the application of food microbiology in food processing. It covers critical areas such as controlling chemical and physical contamination, conducting risk assessments within the food system, and investigating foodborne diseases. Participants will also explore quality control practices throughout the animal-origin food chain, the implementation of surveillance and monitoring systems for food safety, and the development of effective sampling plans and sample collection techniques for food safety assessments.
		This workshop explores key topics in global food policy and international trade, examining their impact on food

Food security (true)	Sustainable Food Safety workshop (The coursework of Master of Sciences in Veterinary Public Health)	security in the context of global changes. It covers critical issues such as greenhouse gas management in livestock production and sustainable practices within the animal-origin food sector. Participants will gain insights into the animal-origin food production and processing systems, as well as the entire value chain from farm to table. The workshop also delves into alternative and future food sources, addressing innovative approaches to ensuring food security in an evolving global landscape.

TOR 3: HARMONISATION OF STANDARDS

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

Proposal title	Scope/Content	Applicable Area

3. In exercising your activities, have you identified any regulatory research needs* relevant for WOAH?

Yes

Research need 1

Please type the Research need: ToR 4: To establish and maintain a network with other WOAH Collaborating Centres designated for the same specialty, and should the need arise, with Collaborating Centres in other disciplines. • Participate as a Review Team for the Terms of Reference (ToRs) of WOAH Competency Package n°10 on Partnership. • Participant as a development team of E-learning Modules on Leadership in Veterinary Services

Relevance for WOAH Capacity Building,

Relevance for the Code or Manual Manual,

Field

Animal Category

Disease:

Kind of disease (Zoonosis, Transboundary diseases)

If any, please specify relevance for Codes or Manual, chapter and title

(e.g. Terrestrial Manual Chapter 2.3.5 - Minimum requirements for aseptic production in vaccine manufacture)

Answer:

Notes:

Answer:

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

Yes

Name of WOAH 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	Europa	Development of E-learning Modules on Leadership in Veterinary Services
Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale"	Teramo, ITALY	Europa	Development of E-learning Modules on Leadership in Veterinary Services
Centre National de Veille Zoosanitaire (CNVZ)	Tunis,TUNISIE	África	Development of E-learning Modules on Leadership in Veterinary Services
Center of Animal Health and Food Safety (CAHFS)	Minnesota, USA	América	Review Team for the Terms of Reference (ToRs) of WOAH Competency Package n°10 on Partnership.

TOR 4 AND 5: NETWORKING AND COLLABORATION

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

Yes

Name of WOAH CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose

WOAH Sub-Regional Representation for South-East Asia	Thailand	Asia and Pacific	Workshop on Leadership in Veterinary Service

TOR 6: EXPERT CONSULTANTS

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

No

TOR 7: 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 WOAH, to personnel from WOAH Members?

Yes

a) Technical visit : 0

b) Seminars : 1

c) Hands-on training courses: 2

d) Internships (>1 month) : 0

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	Food Safety Risk Assessment for Informal Value Chains Workshop	Cambodia, China, Germany, Indonesia, Malaysia, Myanmar, Philippines, Lao PDR, Sudan, Thailand, Vietnam	26
B	The 21st International Society for Animal Hygiene (ISAH) Conference	Australia, Bangladesh, Belgium, Bhutan, Brazil, Brunei Darussalam, Cambodia, Canada, China, Cote D'Ivoire, Czech Republic, Estonia, France, Germany, Hong Kong, India, Indonesia, Japan, Kazakhstan, Lao PDR, Malaysia, Mexico, Myanmar, Nepal, Netherlands, Norway, Pakistan, Philippines, Poland, Portugal, Senegal, Singapore, Sudan, Taiwan, Tanzania, Uganda, United Kingdom, United States, Vietnam, Thailand	415

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C	Epidemiological Models for Animal and Human Diseases workshop	China, Indonesia, Myanmar, Philippines, United States, Vietnam, Thailand	23

TOR 8: 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 WOAH?

No

TOR 9: DATA AND INFORMATION DISSEMINATION

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

a) Articles published in peer-reviewed journals:

11

1. Punyapornwithaya V, Arjkumpa O, Buamithup N, Jainonthee C, Salvador R and Jampachaisri K (2024) The impact of mass vaccination policy and control measures on lumpy skin disease cases in Thailand: insights from a Bayesian structural time series analysis. Front. Vet. Sci. 10:1301546. doi: 10.3389/fvets.2023.1301546

2. Pirompud P, Sivapirunthep P, Punyapornwithaya V, Chaosap C, Application of machine learning algorithms to predict dead on arrival of broiler chickens raised without antibiotic program, Poultry Science, Volume 103, Issue 4, 2024, 103504, ISSN 0032-5791, https://doi.org/10.1016/j.psj.2024.103504.

3. Pirompud P, Sivapirunthep P, Punyapornwithaya V, Chaosap C, Machine learning predictive modeling for condemnation risk assessment in antibiotic-free raised broilers, Poultry Science, Volume 103, Issue 12, 2024, 104270, ISSN 0032-5791, https://doi.org/10.1016/j.psj.2024.104270.

4. Jainonthee C, Chaisowwong W, Ngamsanga P, Meeyam T, Sampedro F, Wells S, Pichpol P, Exploring the influence of slaughterhouse type and slaughtering steps on Campylobacter jejuni contamination in chicken meat: A cluster analysis approach, Heliyon, Volume 10, Issue 12, 2024, e32345, ISSN 2405-8440, https://doi.org/10.1016/j.heliyon.2024.e32345.

5. Luevitoonvechakij, N., Buranapim, N., Suriyasathaporn, W., Bansiddhi, P., Warrit, K., Punyapornwithaya, V., & Suriyasathaporn, W. (2024). Cadaveric Study on Comparison of Neck Extension Angles for Endotracheal Intubation in Rabbits Using a Rigid and Flexible Endoscope. Animals, 14(9), 1270. https://doi.org/10.3390/ani14091270

6. Klaharn, K., Ngampak, R., Chudam, Y., Salvador, R., Jainonthee, C., & Punyapornwithaya, V. (2024). Analyzing and forecasting poultry meat production and export volumes in Thailand: a time series approach. Cogent Food & Agriculture, 10(1). https://doi.org/10.1080/23311932.2024.2378173

7. Supanta J, Brown JL, Bansiddhi P, Thitaram C, Punyapornwithaya V, Punturee K, Towiboon P, Somboon N and Khonmee J (2024) Physiological changes in captive elephants in northern Thailand as a result of the COVID-19 tourism ban—stress biomarkers. Front. Vet. Sci. 11:1351361. doi: 10.3389/fvets.2024.1351361

8. Arjkumpa O, Wachoom W, Puyati B, Jindajang S, Suwannaboon M, Premashthira S, Prarakamawongsa T, Dejyong T, Sansamur C, Salvador R, Jainonthee C and Punyapornwithaya V (2024) Analysis of factors associated with the first lumpy skin disease outbreaks in

naïve cattle herds in different regions of Thailand. Front. Vet. Sci. 11:1338713. doi: 10.3389/fvets.2024.1338713

9. Shrestha SP, Chaisowwong W, Upadhyaya M, Shrestha SP, Punyapornwithaya V. Cross-correlation and time series analysis of rabies in different animal species in Nepal from 2005 to 2018. Heliyon. 2024 Feb 4;10(3):e25773. doi: 10.1016/j.heliyon.2024.e25773. PMID: 38356558; PMCID: PMC10864965.

10. Sota P, Upontain S, Tangkawattana S, Punyapornwithaya V, Nakhapakorn K, Sripa B. Association between Opisthorchis viverrini infection in cats and humans: Non-spatial and spatial analyses. Vet Parasitol. 2024 Apr;327:110150. doi: 10.1016/j.vetpar.2024.110150. Epub 2024 Feb 22. PMID: 38422711.

11. Chalita Jainonthee, Phutsadee Sanwisate, Panneepa Sivapirunthep, Chanporn Chaosap, Raktham Mektrirat, Sudarat Chadsuthi, Veerasak Punyapornwithaya, Data-driven insights into pre-slaughter mortality: Machine learning for predicting high dead on arrival in meat-type ducks,
Poultry Science, Volume , Issue 1, 2025, 104648, ISSN 0032-5791, https://doi.org/10.1016/j.psj.2024.104648.

b) International conferences:
0

c) National conferences:
0

d) Other (Provide website address or link to appropriate information):
0

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: