



World Organisation
for Animal Health
Founded as OIE

Updates on the regional ASF, PPR and LSD situation and Key Activities

Karma Rinzin & Ashish Sutar
WOAH SRRSEA

26th SEACFMD National Coordinators Meeting
Kuala Lumpur, Malaysia (22 – 24 August 2023)

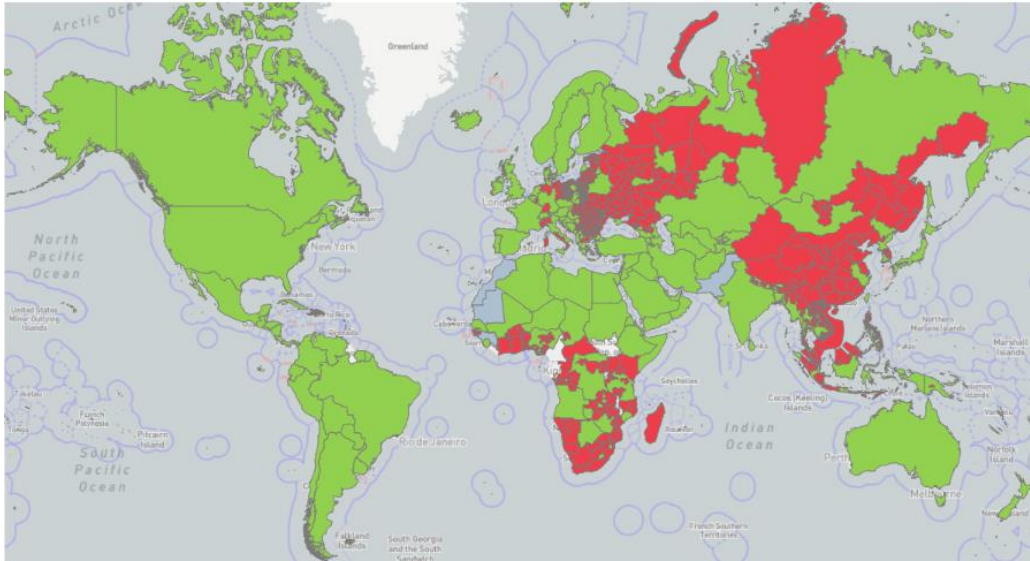
Outline

- Background
- ASF activities in Southeast Asia
- PPR activities in Southeast Asia
- LSD activities in Southeast Asia
- Some insights on Cost efficient synergies in TADs control



African swine fever (ASF) – distribution – 2019 - 2023

ASF is an infectious disease of domestic and wild pigs, caused by ASF virus which is the sole member of the family *Asfarviridae*.

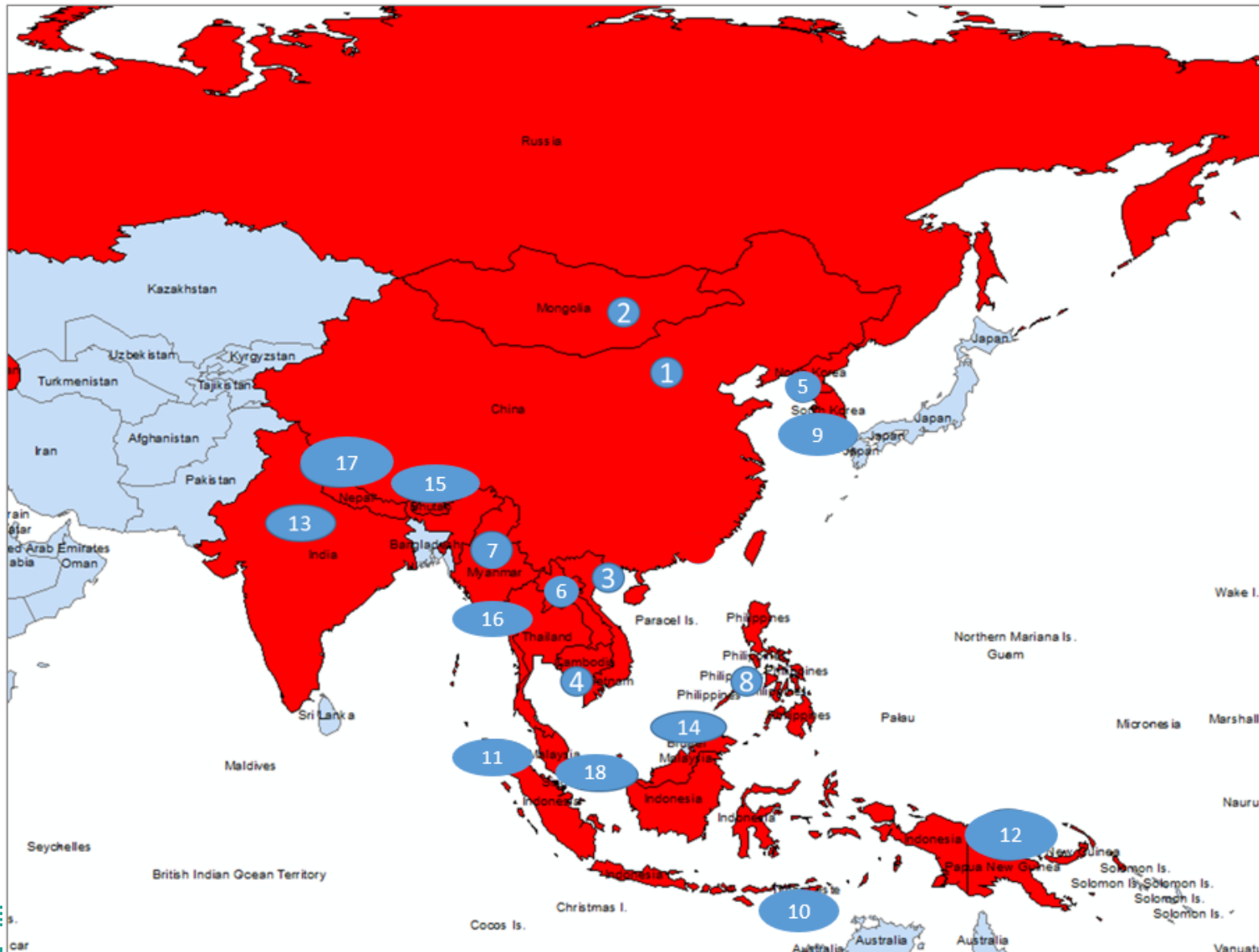


Global (country disease presence): 64



Asia-Pacific (Members presence): 18

ASF Outbreaks in the Asia-Pacific Region



COUNTRY	Date of first outbreak
China	August, 2018
Mongolia	January, 2019
Vietnam	February, 2019
Cambodia	March, 2019
DPR Korea	May, 2019
Lao PDR	June 2019
Myanmar	August 2019
Philippines	September, 2019
R.O Korea	September, 2019
Timor-Leste	September, 2019
Indonesia	November, 2019
PNG	March, 2020
India	May, 2020
Malaysia	March 2021
Bhutan	May 2021
Thailand	January 2022
Nepal	May 2022
Singapore	February 2023

ASF Regional Coordination through SGE under GF-TADs



Eighth Meeting of the Standing Group of Experts on African Swine Fever for Asia

Qingdao, People's Republic of China

27-28 July 2023

Focused on reinforcement of biosecurity measures for ASF and other swine diseases at the national and regional level

With financial supports from:

中华人民共和国农业农村部
Ministry of Agriculture and Rural Affairs of the People's Republic of China

Ministry of Agriculture, Food and Rural Affairs
Republic of Korea



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Policy supports

Finalised

- Global control of ASF: GFTADs initiative – Global
- PVS – ASF Specific content (Philippines)
- Lab protocol and algorithm
- ASF in wild pigs
- ASF diagnostic tests for field application
- Compartmentalisation guidelines: ASF
- ASF Cross-border risk assessment manual
- ASEAN ASF Prevention and Control strategy
- After Action review for ASF response

Ongoing/ Pipeline

- Lao Pig Project
 - Lot 1 - assess ASF risk at domestic-wildlife interface;
 - Lot 2 - training of CAHWs and Wildlife Rangers
- Support to development of Risk-based ASF Control Strategy in selected countries
- Lab protocol and algorithm revision
- Feasibility study on carcass disposal

ASEAN ASF Prevention and Control Strategy

GOAL

To achieve regional control of ASF that will result in a reduction of the adverse impact of ASF on the pig sector and wild suid populations in Southeast Asia



OUTCOMES

1. Regional coordination and cooperation for more effective prevention and control of ASF is improved

2. Capability of countries to prevent and control ASF is enhanced.

3. Multisectoral and multi-disciplinary partnership to ensure sustainable ASF prevention and control is enhanced



OUTPUTS

1.1. Set up ASEAN ASF Governance structure

1.2. Harmonize Regional Coordination Mechanism in line with GF-TADs and other relevant frameworks

1.3. Establish mechanisms to facilitate immediate notification, reporting and dissemination of disease information

2.1. Systematic evaluation of the capability of Veterinary Services, in particular to control ASF.

2.2. Provision of technical guidelines and resources for ASF prevention and control including facilitation of safer trade

2.3. Capacity building programmes to prevent and control spread of ASF and priority TADs

2.4. Strengthen legislation and policy on prevention and control of ASF and other TADs

3.1. Strengthen engagement and coordination with relevant stakeholders, including private sector

3.2. Apply Multisectoral and Multidisciplinary partnerships to control ASF (and other priority TADs)

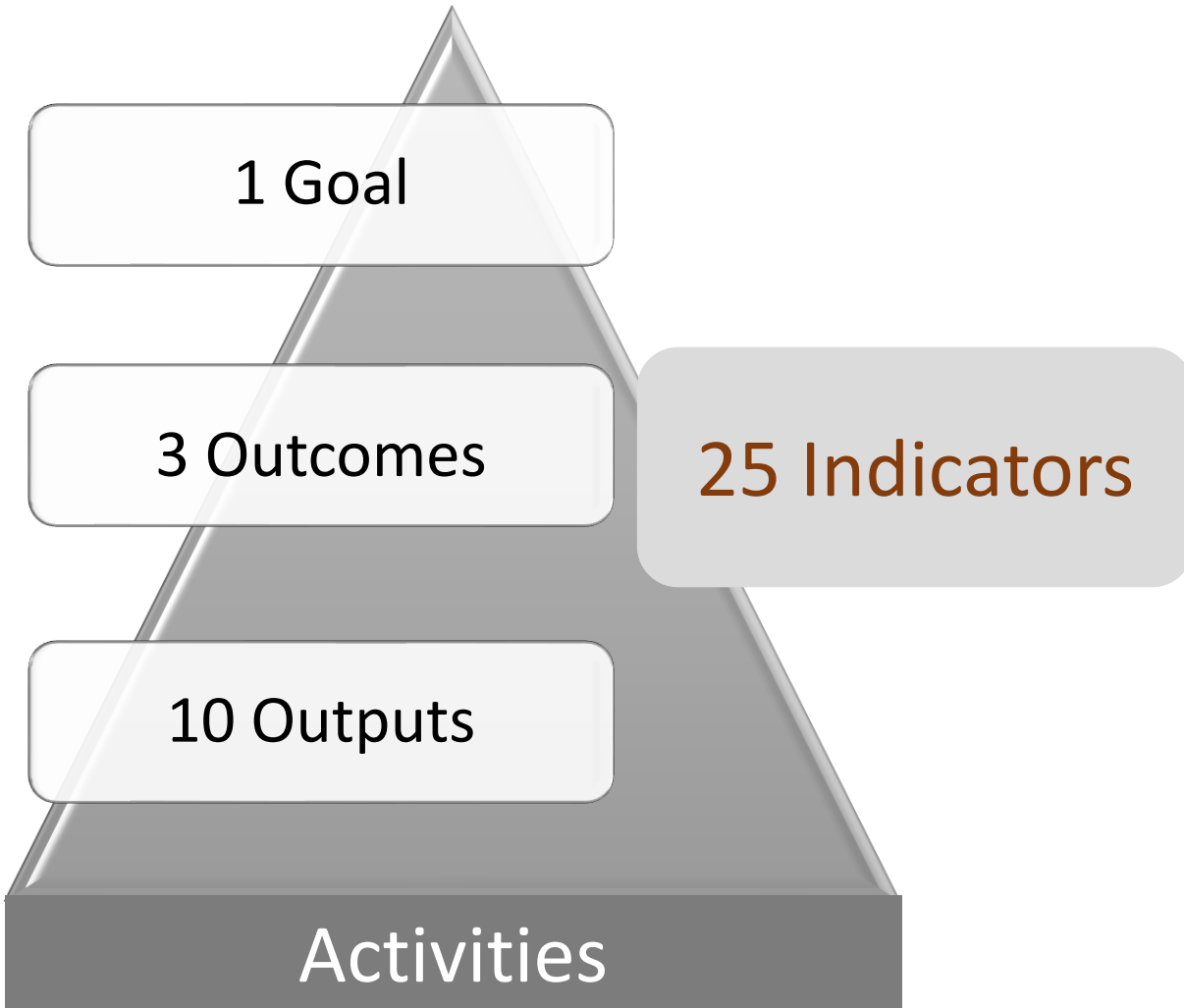
3.3. Promote a sustainable funding mechanism for ASF prevention and control

ASEAN ASF Workshop

2 – 4 May 2023, Manila, The Philippines



ASEAN ASF Prevention and Control Strategy



Monitoring &
Evaluation
Framework

ASF Awareness Materials

AFRICAN SWINE FEVER

You can STOP ASF spread

African swine fever (ASF) is a deadly disease of domestic and wild pigs. There is no effective vaccine nor treatment against it. ASF is not a danger to human health, but it is devastating for the farming economy. You can take action to protect your pigs, and your neighbours' pigs, from this disease.

How to prevent ASF

Implement biosecurity measures:

✓ SEGREGATION

- Build a pigpen to prevent contact with wild pigs.
- Isolate new pigs for at least 30 days and look out for clinical signs.
- Control staff and visitors' movements on and off the farm.
- Limit vehicular access to the farm to authorised vehicles only.

✓ HYGIENE

- Use dedicated footwear and clothing on site.
- Take a shower or wash your hands with soap and water before and after visiting a pig housing area.
- Place disinfection points at entrances and exits of pig areas, including foot baths.
- Frequently clean and disinfect all the materials (vehicles, equipment, footwear) with an approved product.

✓ FEEDING

- If you use swill, always boil it for 30 minutes and cool it before feeding.
- Provide your pigs with clean water.

WHEN TO SUSPECT ASF

Look out for the clinical signs:

- Diarrhoea
- Loss of appetite and weakness
- High temperature
- Reddening of the skin in tips of ears, snout, tail, extremities, chest and abdomen
- Vomiting
- Heavy discharge from eye and nose
- Increase in mortality

WHAT TO DO IN CASE OF ASF SUSPICION

Immediately report any suspicious case to your veterinarian or local Veterinary Services

Feed and Agriculture Organization of the United Nations | World Organisation for Animal Health

AFRICAN SWINE FEVER

Simple actions can prevent ASF

African swine fever (ASF) kills pigs. The spread of this disease around the globe is responsible for massive losses in pigs and drastic socio-economic consequences. Pig production is critical to the food security and livelihoods of millions of people. We can all play a role to safeguard them.

KNOW HOW ASF SPREADS

THE MORE WE KNOW, THE BETTER WE CAN STOP THE SPREAD!

Your HEALTH is not threatened by ASF

Humans don't get sick from ASF. The disease cannot be transmitted to humans through contact with pigs or by eating pork products.

You could be CARRYING the ASF virus

The ASF virus is very resistant. You can carry it on clothing, shoes, equipment, and vehicles if you have visited an infected area, or if you bring pork products with you.

You can HELP stop ASF spread

- Avoid carrying pork products when travelling or declare them to the transport authorities
- Keep away from pig farms and wild pigs, unless strictly necessary
- Do not feed pigs with food waste or kitchen scraps containing meat products
- Dispose food waste containing pork products properly in secure bins
- Report sick or dead pigs or wild boar to the authorities

Feed and Agriculture Organization of the United Nations | World Organisation for Animal Health

AFRICAN SWINE FEVER

You can STOP ASF spread

African swine fever (ASF) is a deadly viral disease of domestic and wild pigs. It is a severe threat to pigs' health as there is no effective vaccine nor treatment against it. ASF is not a danger to human health but it can lead to catastrophic socio-economic consequences for the pig farming sector.

As a veterinarian, you have a crucial role in protecting pig production systems from this devastating disease.

RECOGNISE ASF

Clinical signs include:

- Diarrhoea
- Loss of appetite and weakness
- High temperature
- Reddening of the skin in tips of ears, snout, tail, extremities, chest and abdomen
- Vomiting
- Heavy discharge from eyes and nose
- Respiratory distress
- Increase in mortality

ASF could look like

- Classical swine fever (CSF)
- Porcine reproductive and respiratory syndrome (PRRS)
- Erysipelas
- Salmonellosis (and other bacterial septicemias)
- Aujeszky's disease (or pseudotuberculosis)
- Pasturellaemia
- Poisoning
- Porcine dermatitis and nephropathy syndrome (PDNS)

CONFIRM YOUR DIAGNOSIS BY A LABORATORY TEST

Recommended samples: blood or serum, organs, tissues (such as: from spleen, lymph nodes, tonsil, lungs, kidney and bone marrow)

Follow best practices with your sample:

- Collect it aseptically and wash your hands before and after collection
- Handle it carefully to avoid sample degradation, contamination or spillage
- Bag, seal, package and label it according to laboratory guidelines
- Dispatch it to the diagnostic laboratory as soon as possible

WHAT TO DO IF YOU SUSPECT OR CONFIRM ASF ON A FARM

- NOTIFY** the national veterinary authorities as soon as possible
- COLLECT** key epidemiological information (describe farms and animals)
- QUARANTINE** infected or suspected farms
- ALERT** neighbouring farmers
- AVOID VISITING** other farms for at least 48 hours

Feed and Agriculture Organization of the United Nations | World Organisation for Animal Health

AFRICAN SWINE FEVER

ASF kills pigs

African swine fever (ASF) is a highly contagious disease of domestic and wild pigs. There is no vaccine against it. It is not a danger to human health but it can lead to severe economic losses for your production.

Take strict preventative measures on your farm.

Protect your and your neighbours' farms.

Commercial pig farms

Don't be the carrier of a deadly pig disease

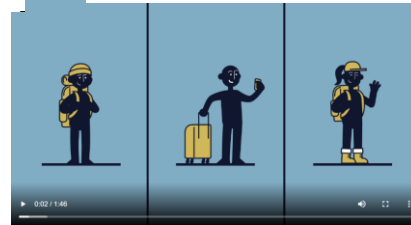
RESPECT GENERAL PRECAUTIONS

- Declare any suspicious case (dead or alive) to the Veterinary Services
- Ensure that all your workers and visitors are aware of biosecurity rules
- Clean and disinfect material and equipment coming in or out
- Prevent direct or indirect contact with wild boar. Implement quarantine measures for new pigs on farm
- Do not feed untreated swill or kitchen scraps containing meat to your pigs

For more information: www.woah.org/asf

World Organisation for Animal Health

ASF awareness posters, social media cards, videos targeting key sectors (travel, veterinarian, commercial pig farms, pig farmers, policy-makers, etc.), co-developed with FAO.



<https://trello.com/b/GloiZoik/african-swine-fever-woah-fao>



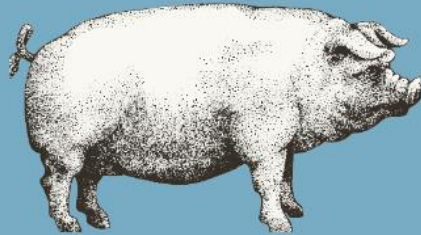
Reports and Guidelines



African swine fever in wild pigs in the Asia and the Pacific Region



AFRICAN SWINE FEVER CROSS-BORDER RISK ASSESSMENT MANUAL: SOUTH-EAST ASIA



The OIE ASF Reference Laboratory Network's overview of African swine fever diagnostic tests for field application



February 2022



Compartmentalisation Guidelines



AFRICAN SWINE FEVER



<https://rr-asia.woah.org/en/projects/asf>



Capacity Building Programme



Training of Trainers (ToT) on outbreak investigation (31 May – 8 July 2021)

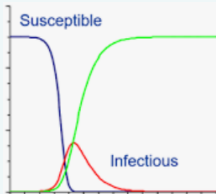
21 participants from 9 countries



Epidemiology study design training

(11 Nov – 10 Dec 2021)

34 participant from 11 countries.



Infectious disease modelling training

(21 Feb – 31 March) – Ongoing
40 participants from 12 countries are attending the course.



Advanced GIS training

(27 July - 30 Aug 2021)

31 participants from 10 countries.



Transborder value-chain analysis in South-East Asia and the Pacific

16 participants from 5 countries



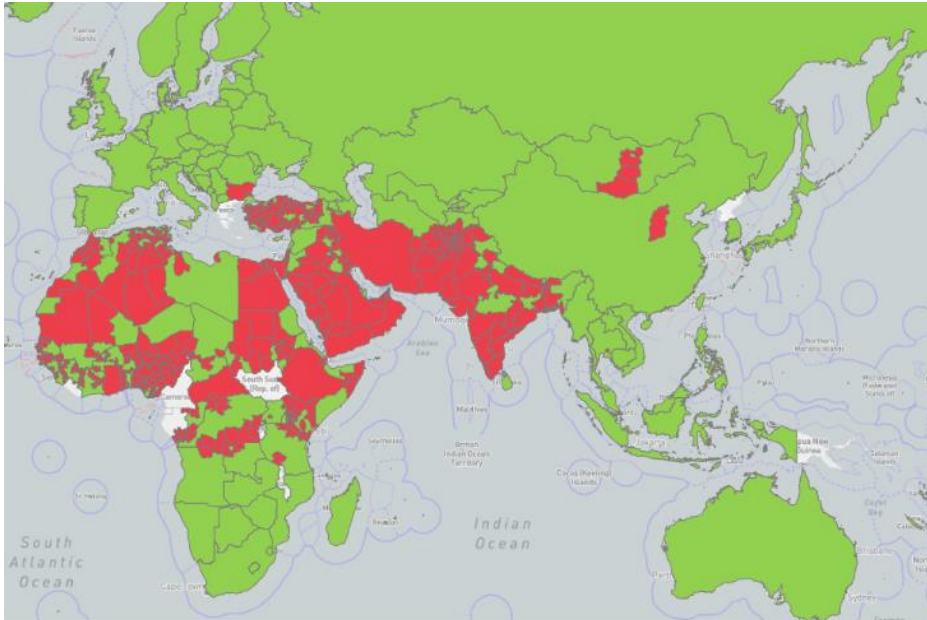
Cross Border Risk Assessment South-East Asia

(Sept 2020 to May 2021)

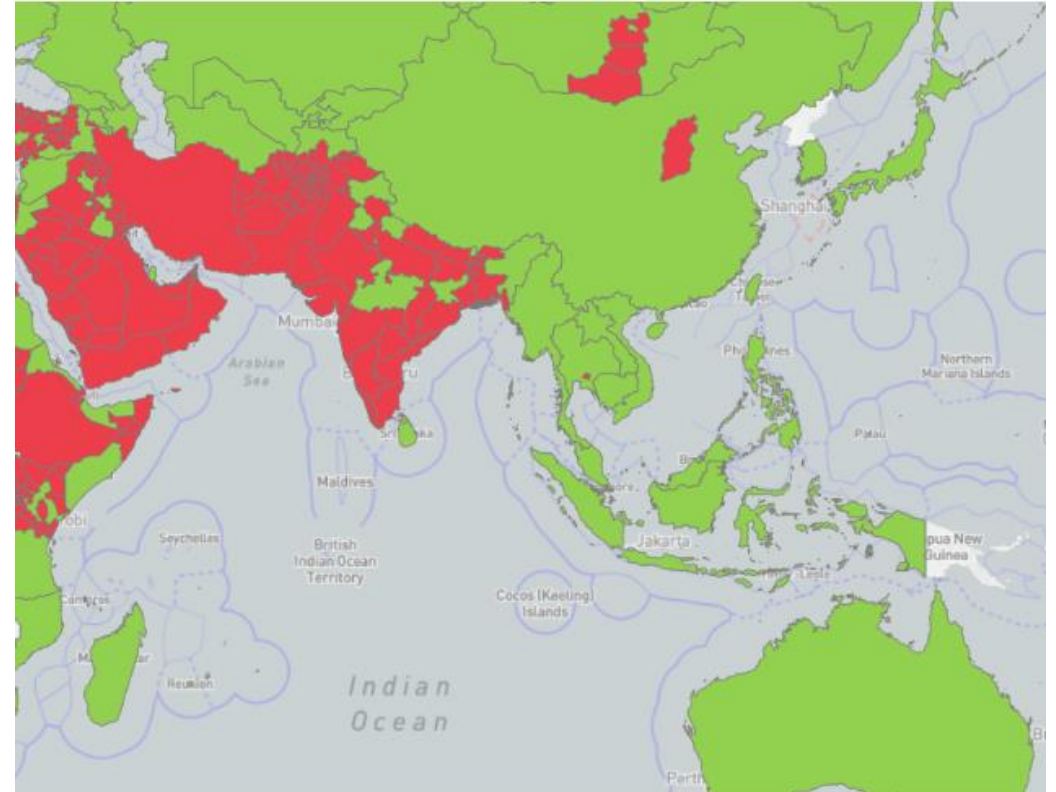
22 Participants from 13 countries.

PPR – disease distribution – 2019 - 2023

Peste des Petits Ruminants (PPR), also known as sheep and goat plague, is a highly contagious and devastating animal disease affecting small ruminants. It is caused by a virus belonging to the genus *Morbillivirus*, family *Paramixoviridae*.



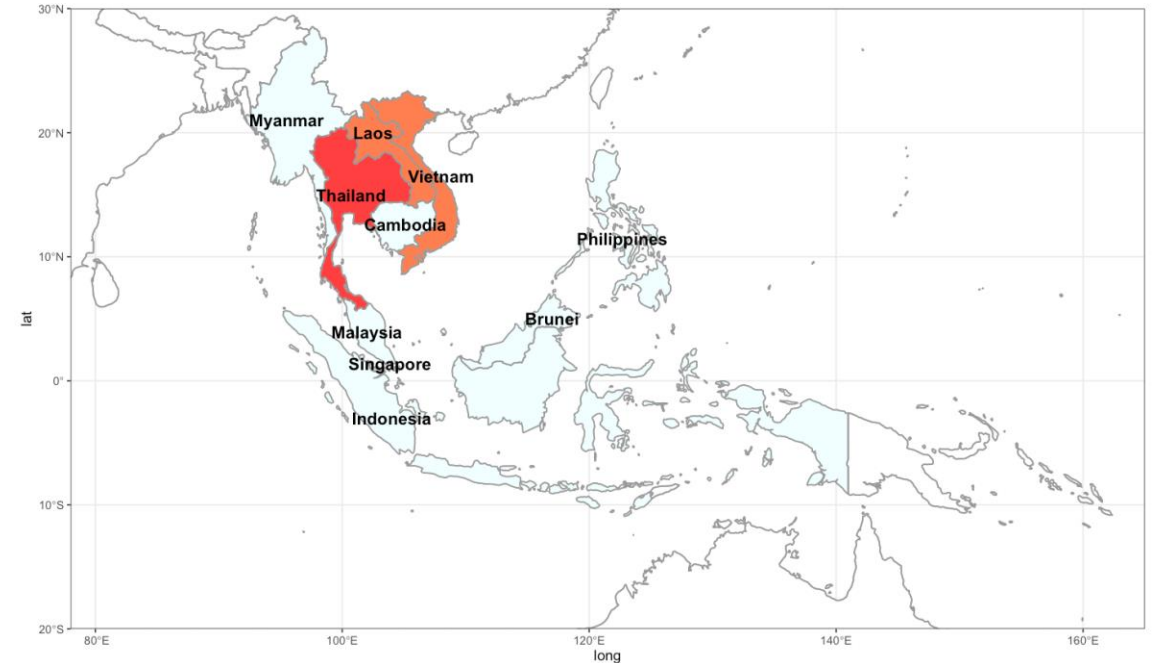
Global (country disease presence): 51



Asia-Pacific (Members presence): 12

PPR in the ASEAN region

- Historically free from PPR
- Introduction of PPRV in Thailand from Africa
- Need to be prepared for a similar introduction of PPRV or an incursion from endemic countries
- ASWGL decided to develop an ASEAN PPR Preparedness Strategy



The ASEAN region has been historically free from PPR except for serological evidence of the disease in Laos and Vietnam and an outbreak in imported goats in Thailand

Training of Animal Health staff on PPR

Content of the eLearning Module

Introduction
to the disease

Socio-
economic
impact

Clinical signs

Post-mortem
findings

Diagnosis

Differential
diagnosis

Prevention

Control
strategies

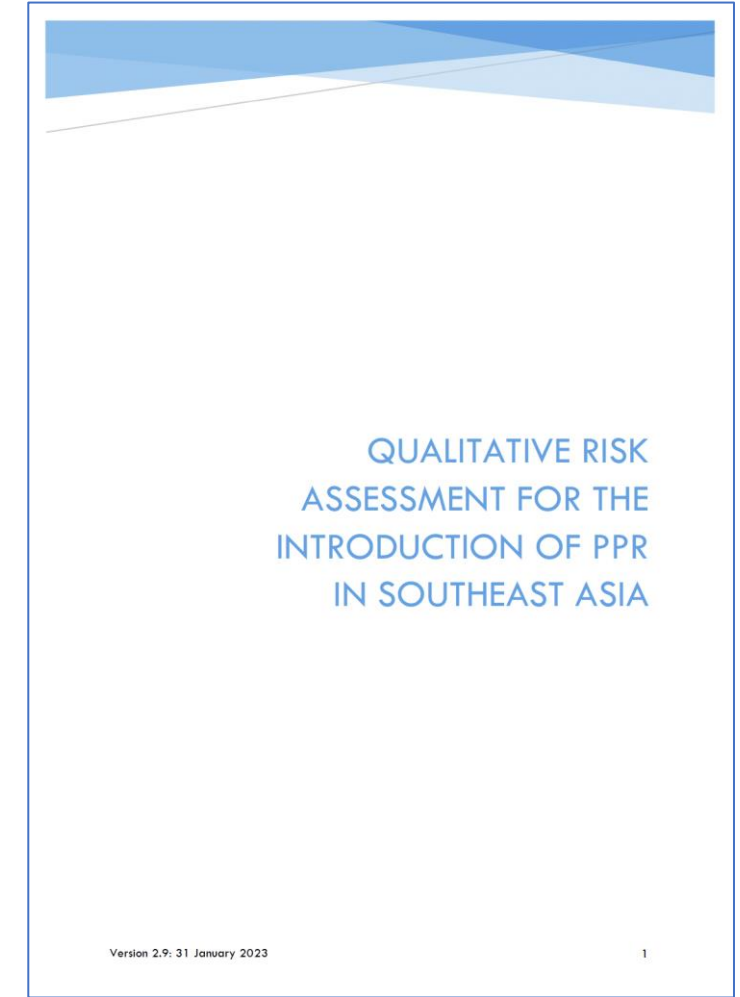
Surveillance

83 staff from nine AMS attended Virtual
Training: 4 – 17 October 2022 followed by
Closing seminar on 18 Oct 2022

PPR Risk Assessment study

Objective

- To assess the likelihood of the introduction of PPRV into AMS



PPR Risk Assessment

Key Recommendations

Import from low-risk countries

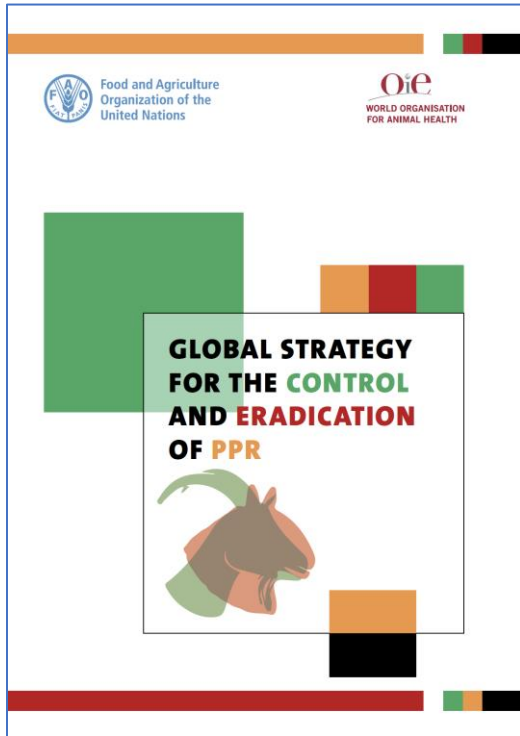
Insist on the provision of an international veterinary certificate

Ensure pre-quarantine arrangements

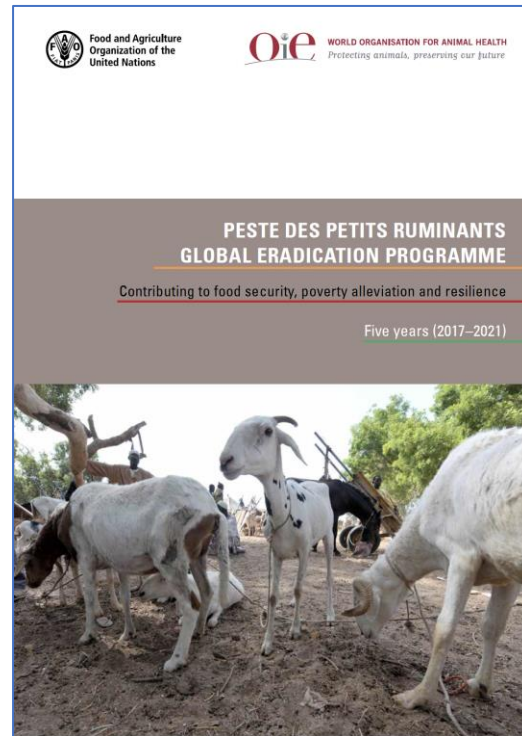
Strengthen quarantine facilities and workforce

Strengthen border biosecurity

ASEAN PPR Preparedness Strategy



2015



2017 - 21



2022 - 30

GF-TADs Strategy
for 2021–2025
Enhancing control
of transboundary animal diseases
for global health



ASEAN Strategy for Exotic,
Emerging, Re-emerging
Diseases and Animal Health
Emergencies (2021)

ASEAN STRATEGIC PLAN OF ACTION FOR
COOPERATION ON LIVESTOCK (2021-2025)

Findings of the PPR Risk Assessment



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Development of ASEAN PPR Preparedness Strategy

Vision:

The ASEAN Member States are officially recognised as PPR-free by WOAHA and maintain PPR freedom.

Goal:

To strengthen capacity in the ASEAN region to prepare, prevent, detect, respond to, and recover from outbreaks of PPR and other priority small ruminant diseases.

The achievement of the goal will be indicated by:

- the absence of incursion of PPR in the region,
- the prompt detection and containment of a future PPR outbreaks a
- the achievement and maintenance of the official recognition of Members' PPR-free status.

ASEAN PPR Preparedness Strategy

VISION: The ASEAN Member States are officially recognised as PPR-free by WOAHA and maintain PPR freedom.

GOAL: To strengthen capacity in the ASEAN region to prepare, prevent, detect, respond to, and recover from outbreaks of PPR and other priority small ruminant diseases.



OUTCOMES

1. The ASEAN region has enhanced coordination, legal and regulatory frameworks and resources for PPR early warning and rapid response.

2. The ASEAN region has enhanced capacity for early detection and rapid response to PPR incursions and other priority small ruminant diseases.

3. The animal health workforce in the ASEAN region has enhanced capabilities for risk assessment, surveillance, PPR detection and emergency response.



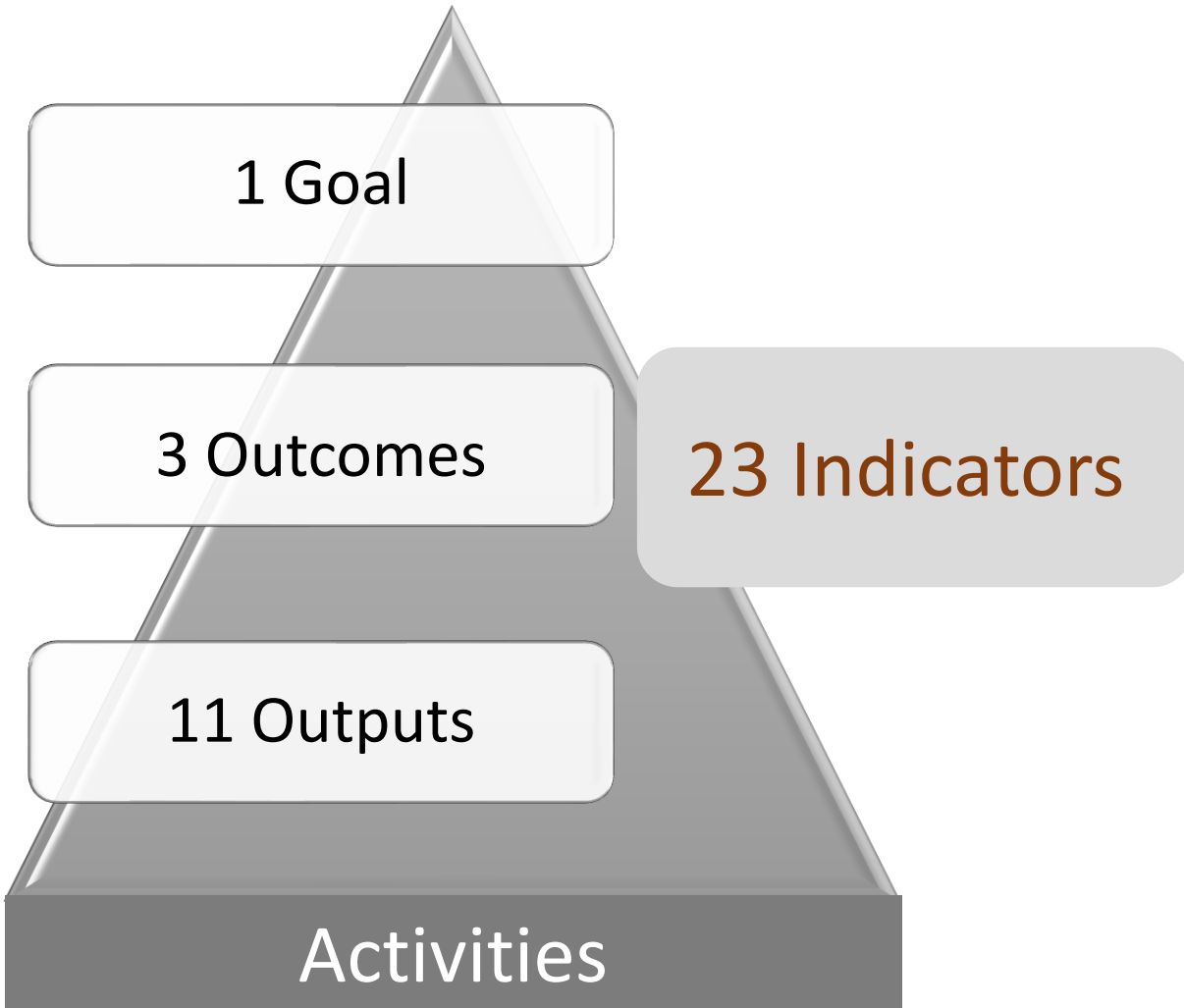
OUTPUTS

1.1. Enhanced coordination among AMS
1.2. Enhanced communication and stakeholder engagement
1.3. A sustainable funding mechanism
1.4. A harmonised legal and regulatory framework

2.1. Strengthened surveillance systems in AMS.
2.2. Strengthened laboratory diagnostic systems in AMS.
2.3. Strengthened pre-border, border and post-border biosecurity
2.4. Official WOAHA recognition of PPR-free status by 2030.

3.1. The capacity of the veterinary workforce in the ASEAN region evaluated.
3.2. Training materials sourced and developed to strengthen workforce capacity.
3.3. Training programmes delivered to strengthen workforce capacity.

ASEAN PPR Preparedness Strategy

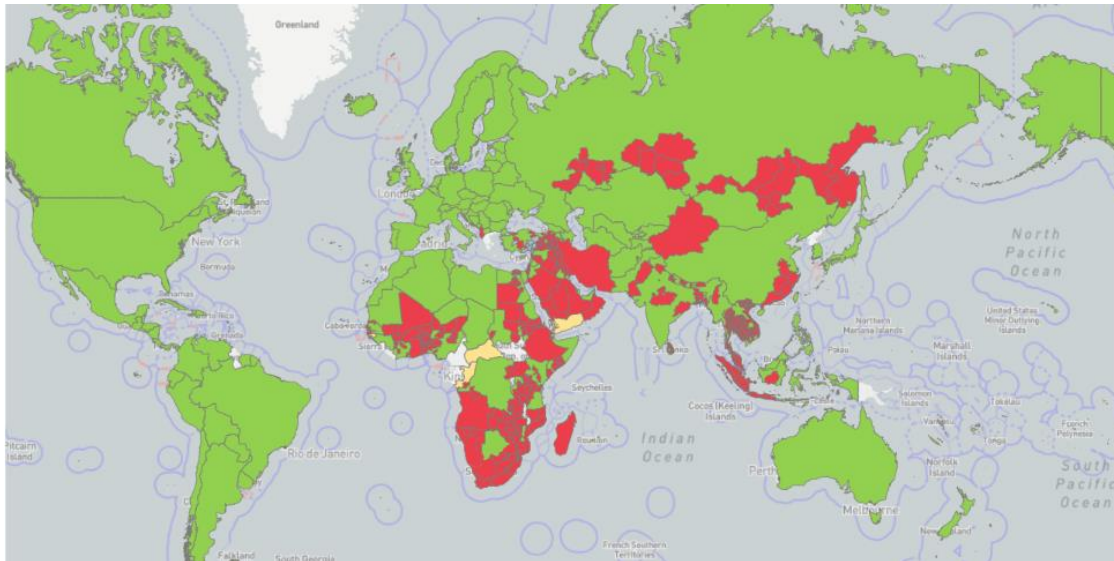


APPS Monitoring and
Evaluation
Framework

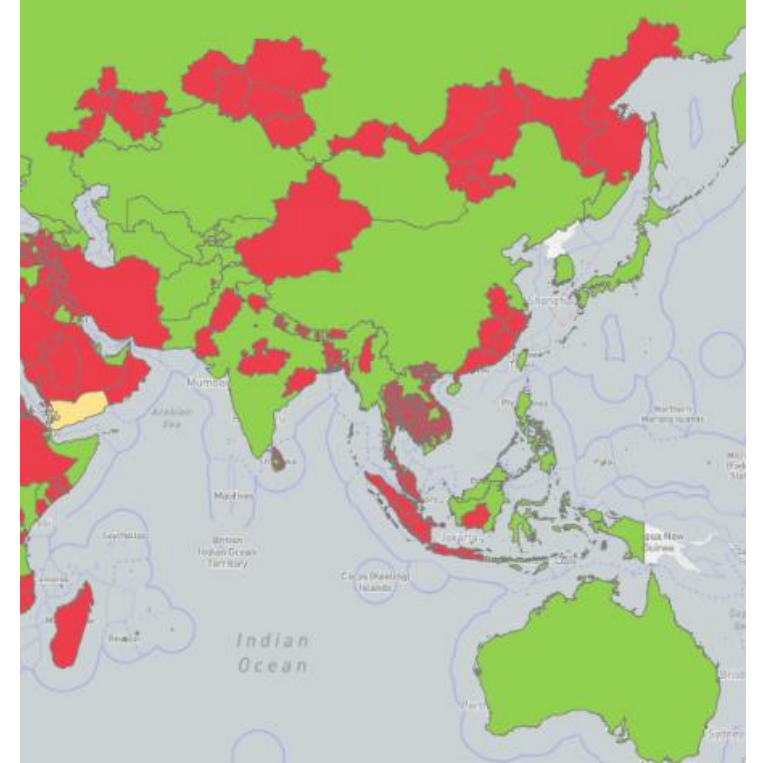
LSD – disease distribution – 2019 - 2023

LSD is vector borne pox disease of domestic cattle and Asian water buffalo, caused by Capripoxvirus (CaPV) within the family Poxviridae.

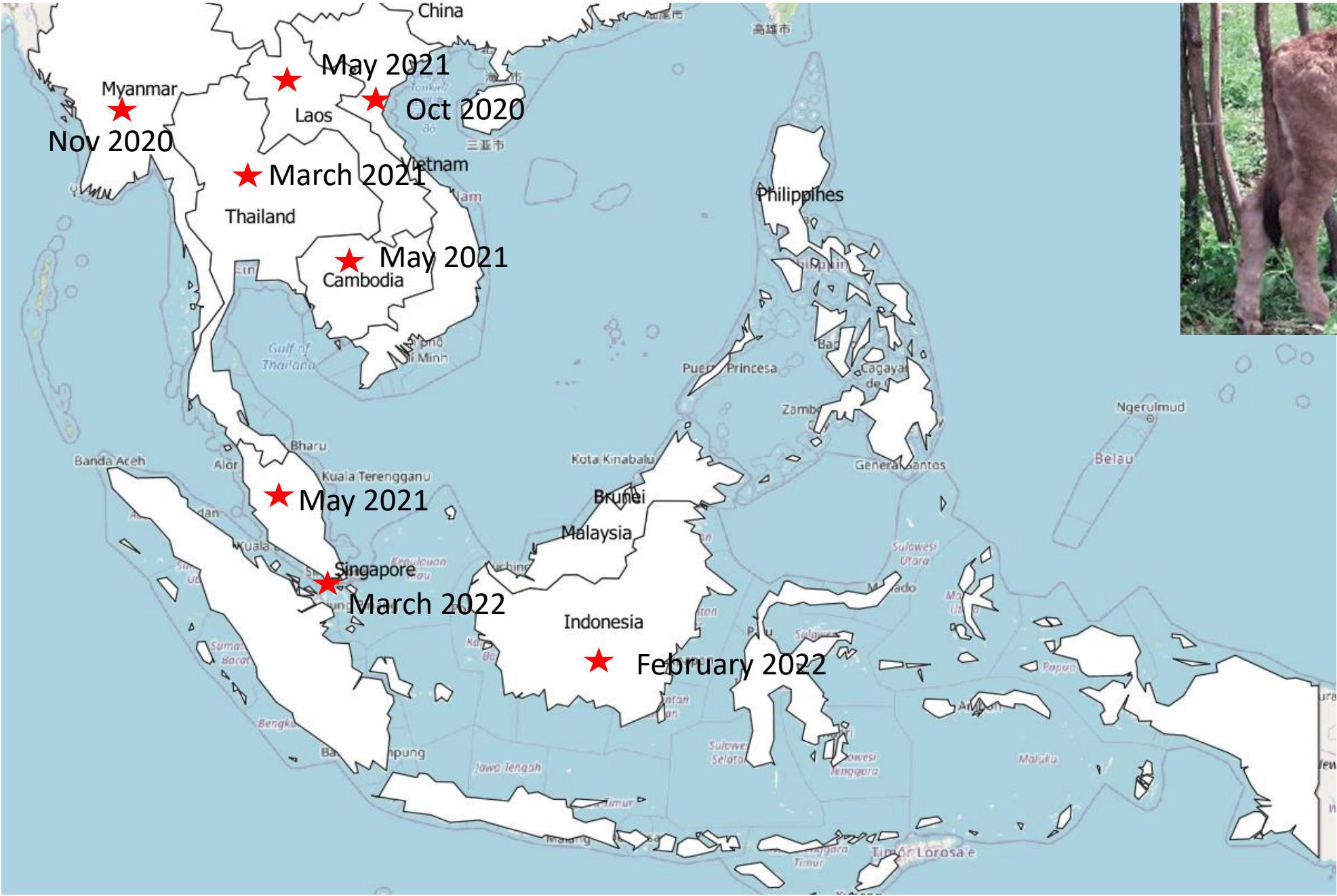
Spread - mainly by blood-feeding arthropod vectors (mosquitoes, biting flies and ticks), Long distance spread is mainly by movement of animals



Global (country disease presence): 59

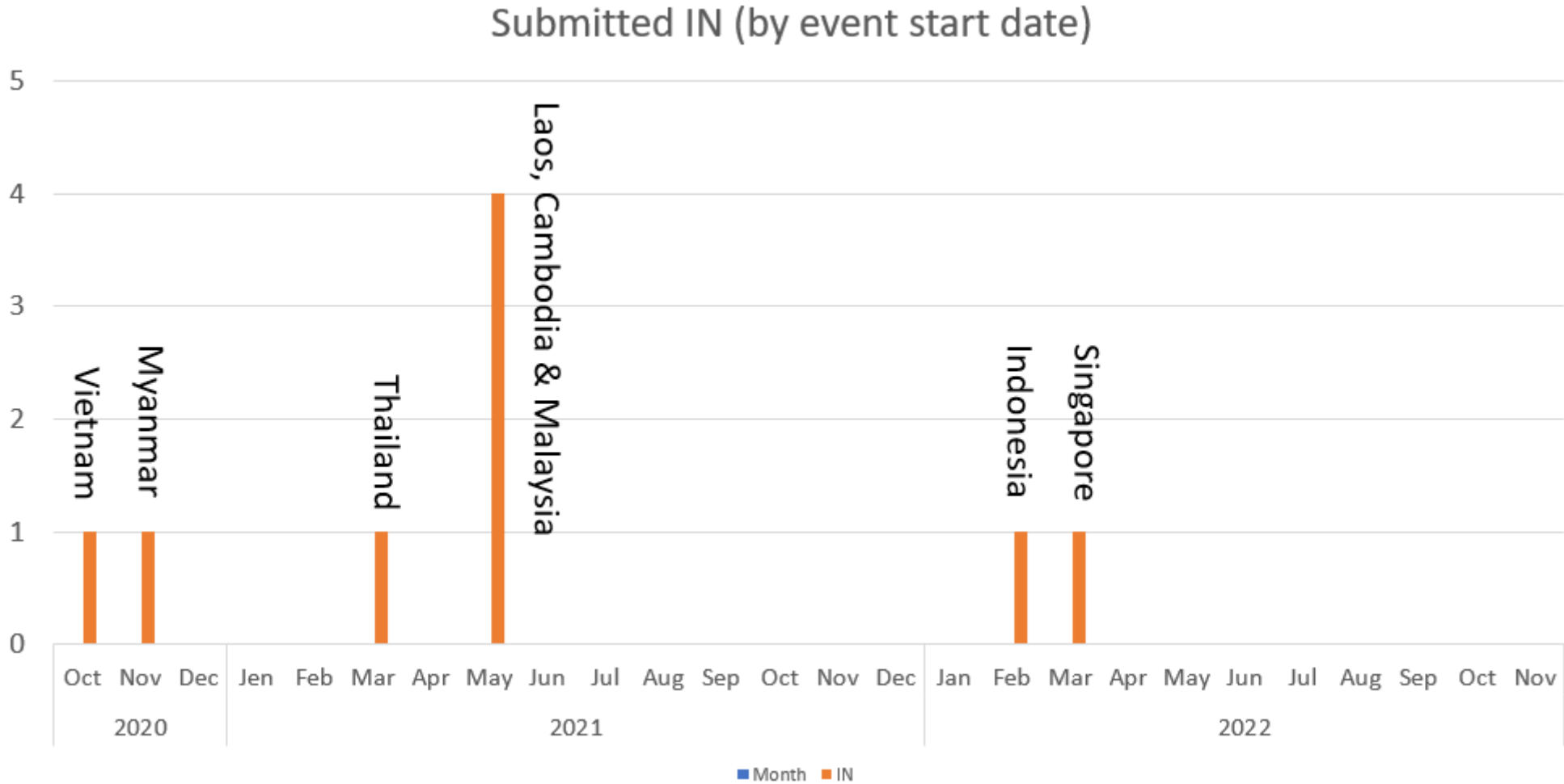


Asia-Pacific (Members presence): 2

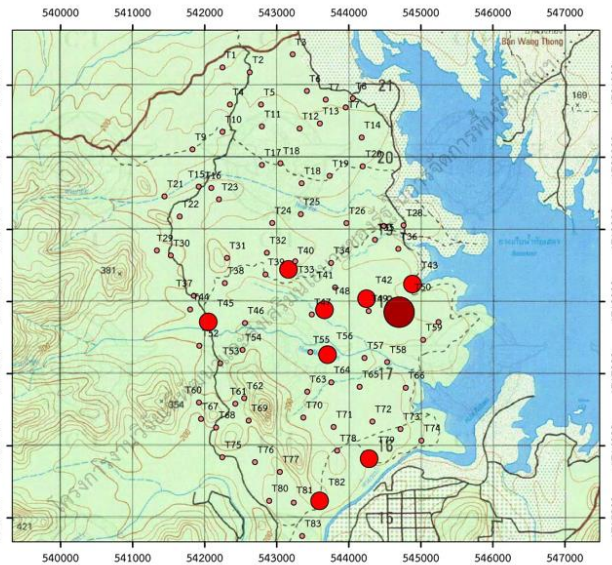


Chronology of reported LSD outbreaks in SEA (based on country report)

Temporal pattern (2020 – 2022) ASEAN Member States – IN reports received by event start date (based on country report)



LSD in wild animals in Thailand



สวทช. NSTD
KUM
KASIKUM
UNIVERSITY

โครงการวิจัยเพื่อพัฒนาและส่งเสริมโยธาของรัฐ
ในการจัดการพื้นที่ภูเขา

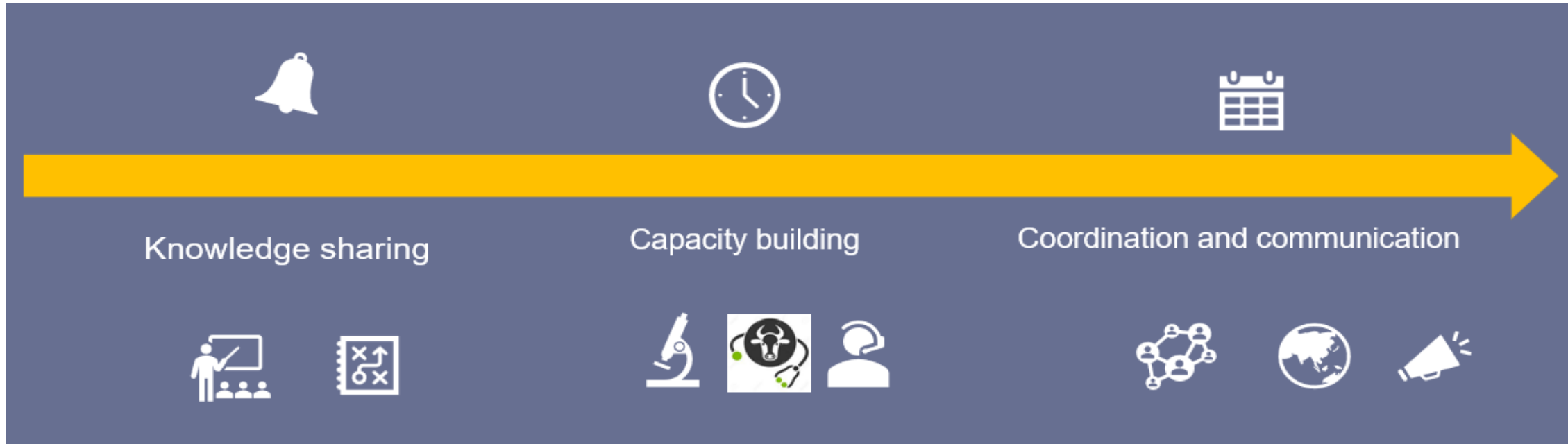
สัญลักษณ์
ตำแหน่งที่ตั้งค่ายภาพสัตว์ป่า
ความถี่การพบโรคในวัวแดง
รอบ 3 เดือน (พ.ค.-ก.ค.)

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*ข้อมูลการปรากฏของวัวแดงเดือนก.ค.-ก.ค. 2564
พบวัวแดงที่วัดป่าโศภนนิเวศน์ ภูผาเขียว



Highlights of activities in response to LSD Outbreaks



Webinars

Emergency response
Laboratory diagnosis
General consultations
Situation Updates

Coordination Meeting & Communication

First Coord. meeting – information sharing and shared tools
Second LSD Coord. Meeting – LSD vaccination
Third LSD Coord Meeting – seek update Communication materials
FAQ - LSD and LSD vaccination

Next:

- LSD Impact Assessment Study
- Guidelines for LSD vaccination
- Support development of ASEAN LSD Prevention and control Strategy

Frequently Asked Questions











- [Q&A – Expert response to questions raised by the participants](#)
- [FAQ on LSD \(14 Jun 2022\)](#)
- [FAQ on LSD Vaccination \(3 Sep 2021\)](#)

<https://rr-asia.woah.org/en/events/lumpy-skin-disease-lsd-coordination-meeting-for-south-east-asia/>



Review

Review: Vaccines and Vaccination against Lumpy Skin Disease

Eeva Tuppurainen ^{1,*}, Klaas Dietze ¹, Janika Wolff ², Hannes Bergmann ³, Daniel Beltran-Alcrudo ^{4,†},
Anna Fahrion ¹, Charles Euloge Lamien ⁵, Frank Busch ¹, Carola Sauter-Louis ³, Franz J. Conraths ³,
Kris De Clercq ⁶, Bernd Hoffmann ² and Sascha Knauf ¹

LSD Communication Materials

Lumpy skin disease

a new threat to the region

Lumpy skin disease (LSD) is a viral disease of domestic cattle, water buffaloes and certain wild ruminants. Its incubation period is about 28 days but experimentally infected cattle may develop clinical signs as early as 6-8 days. This disease heavily impacts animal health and welfare and can lead to severe economic losses in affected farms.

LSD has recently spread to and within Asia, posing a threat to your country.

How do animals get infected?

- Mainly by blood-feeding arthropod vectors.
- Through bringing in infected cattle from affected regions.



When to suspect LSD?

- Ocular (eye) and nasal discharge – usually observed first.
- Decreased milk yield in lactating cattle.
- High fever that may exceed 41 °C or 106 °F.
- Enlarged subcutaneous and prefrontal lymph nodes (swollen palpable).
- Appearance of firm cutaneous nodules of 2-6 cm in diameter, particularly on the head, neck, limbs, udder, genitalia and perineum within 48 hours of onset of fever.
- Number of nodules varies from few in mild cases, to multiple lesions in severely affected animals.



What to do in case of LSD suspicion?

- Contact the Veterinary Services.
- Prevent further spread of the disease by asking the animal owners/keepers to:



- Carry out clinical examinations on the rest of the animals, in order to identify the disease at very early stages.
- Provide supportive treatment to affected animals to reduce the fever, maintain hydration and prevent secondary bacterial infections.
- A vaccine exists to protect the cattle.

Contact the Veterinary Services for more information on the vaccine.

For more information:
OIE regional webpage on LSD:
www.oie.int/en/aphis/hsa/lumpy-skin-disease/



Lumpy skin disease (LSD)

- LSD is a viral disease of domestic cattle, water buffaloes and certain wild ruminants.
- Incubation period of LSD is 28 days but experimentally infected cattle may develop clinical signs as early as 6-8 days.
- It heavily impacts animal health and welfare and can lead to severe economic losses in affected farms.
- LSD has recently spread to and within Asia, posing a threat to your country.

How do animals get infected?

- Mainly by blood-feeding arthropod vectors (mosquitoes, biting flies and ticks).
- Through bringing in infected cattle from affected regions.



For more information

OIE regional webpage on LSD:
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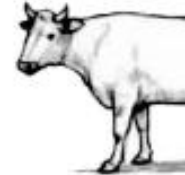
FAO, 2017. Lumpy skin disease field manual - A manual for veterinarians.
www.fao.org/3/i7550e/i7550e01.pdf

Contact us

OIE Asia and Pacific sub-regional office (AP) or South East Asia sub-regional office (SE)

Lumpy skin disease

a threat to the region



How can you protect your country from LSD?

When to suspect LSD?

- Initial signs:
 - Ocular (eye) and nasal discharge – usually observed first.
 - Decreased milk yield in lactating cattle.
 - High fever that may exceed 41 °C or 106 °F.
 - Enlarged subcutaneous and prefrontal lymph nodes (swollen palpable).
- Appearance of firm cutaneous nodules, reddish white lesions of 2-6 cm in diameter.
 - Distensive nodules particularly on the head, neck, limbs, udder, genitalia and perineum within 48 hours of onset of fever.
 - The number of lesions varies from a few in mild cases, to multiple lesions covering the entire body in severely affected animals.



What to do in case of LSD suspicion?

- Contact the Veterinary Services.
- Prevent further spread of the disease by asking the animal owners/keepers to:



- Carry out clinical examinations on the rest of the animals, in order to identify the disease at very early stages.
- Provide supportive treatment to affected animals to reduce the fever, maintain hydration and prevent secondary bacterial infections.
- A vaccine exists to protect the cattle.

Contact the Veterinary Services for more information on the vaccine.

Protecting your animals from Lumpy skin disease

Lumpy skin disease (LSD) affects cattle and water buffalo. It is currently spreading in Asia affecting animal health and welfare, livelihoods, and food security.

LSD poses a threat to your animals.

How your animals can get infected?

- Mainly by bringing insects such as mosquitoes, stable flies and ticks.
- By moving infected cattle from an area where the disease is present.



When to suspect LSD?

- Discharge from eyes and nose.
- High fever.
- Decreased milk yield in lactating cows.
- Appearance of firm round skin nodules, usually noticed first on head and neck.
- Number of nodules varies from few in mild cases to many covering the entire body in severe cases.



What to do in case of LSD suspicion?

- Notify immediately to the local veterinarians or official Veterinary Services.
- Separate suspected case(s) from the rest of the herd.
- Monitor the health of animals everyday in order to identify sick animals.
- Stop cattle movement from/ to the farm.
- Seek advice from vets and parents to provide supportive treatment.

How to prevent and control LSD in your farm?

- Only buy healthy animals from trusted sources.
- Keep farm/ sheds free from breeding sites for insects such as standing water and dung.
- Only allow visitors to your farm for essential services.
- A vaccine exists to protect your animals.

Contact your local vet or contact an official Veterinary Services for information on the vaccine.

For more information:
OIE regional webpage on LSD:
www.oie.int/en/aphis/hsa/lumpy-skin-disease/



Study to assess the impact of LSD

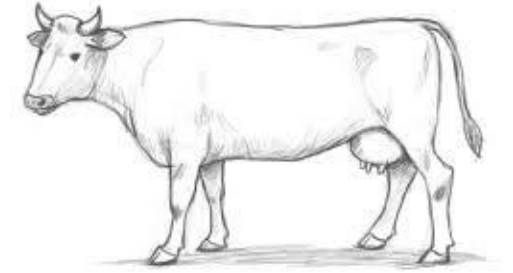
WOAH launched call for proposal – Chiang Mai University is carrying out study to assess the impact of LSD in Asia

Objective 1: review and analyse existing data, and information to better understand the epidemiological characteristic of the disease including the risk factors, introduction and spread of outbreaks, role of vectors in Asia.

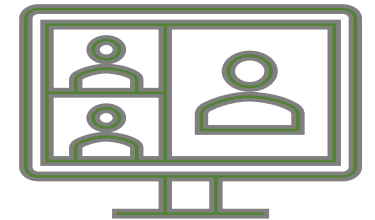
Objective 2: assess management and control strategies of farmers, traders, and Veterinary Services during and post LSD outbreaks in two countries to identify best practices.

Objective 3: assess the socio-economic impact of LSD outbreaks on key stakeholders along the value chain in the 2 selected countries. i.e Thailand and Bangladesh

Ongoing and Planned Activities



- Advocacy and awareness
 - Advocacy to Policy makers - Policy brief for the decision makers – **Ongoing for FMD which will be adapted for other LSD**
 - Infographics and videos on the use on LSD vaccination and use of quality vaccines – **Ongoing**
- Coordination and collaboration
 - **4th LSD Coordination meeting in November 2023**
- Development of ASEAN LSD Prevention and Control Strategy in line with 30th ASWGL Meeting recommendations and GFTADs Strategy 2021 – 2025 - **Ongoing**



Cost efficient synergies for prevention and control of TADs

- **Component 3 of the Global FMD Control Strategy**

- Prevention and control of other major diseases of livestock

- **Combine activities to improve working efficiency**

- FMD training could be synergised with animal nutrition programmes; combine vaccination; awareness programme

- **Broaden programme effects to achieve greater benefits**

- Emerging of new TADs and shifting of priorities
- Horizontal approaches, such as movement control and biosecurity

- **Share resources to maximise the utilities**

- Share cold chain facility of the human health sector with animal health for the delivery of vaccines for FMD and other animal diseases.
- Well-equipped FMD laboratories that could be expanded for the diagnosis of other diseases and vice versa.



Thank You