

World Organisation
for Animal Health
Founded in 1924

Global and Regional LSD situation and review progress of the implementation of LSD Coordination Meetings

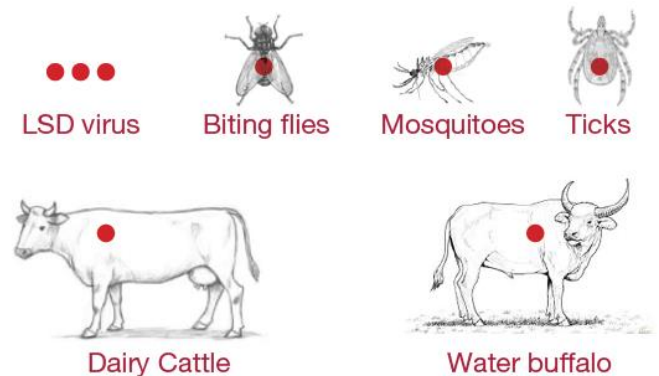
Karma Rinzin

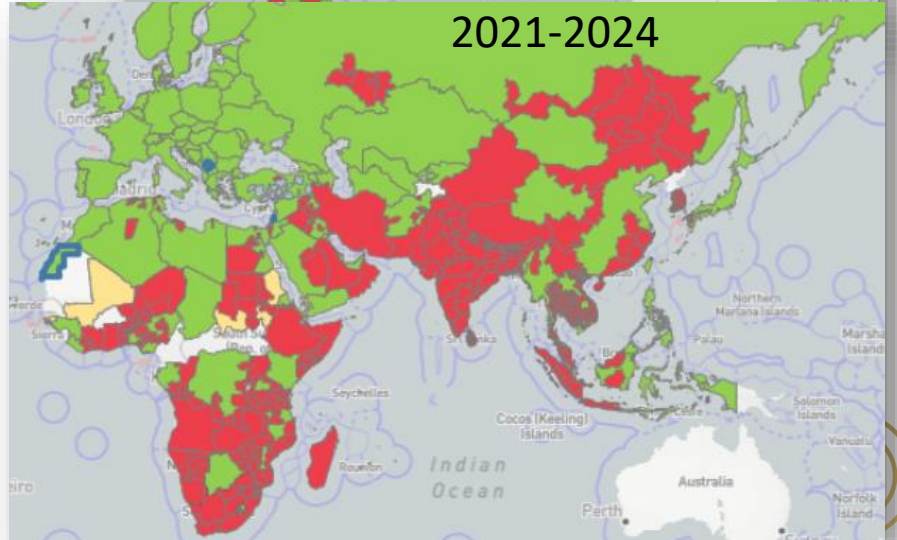
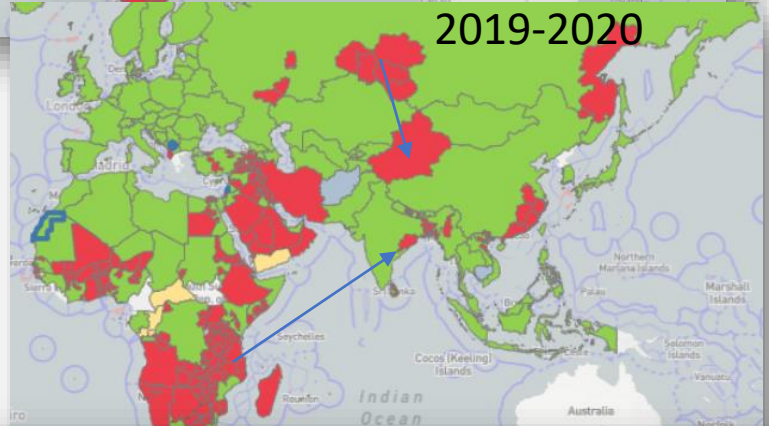
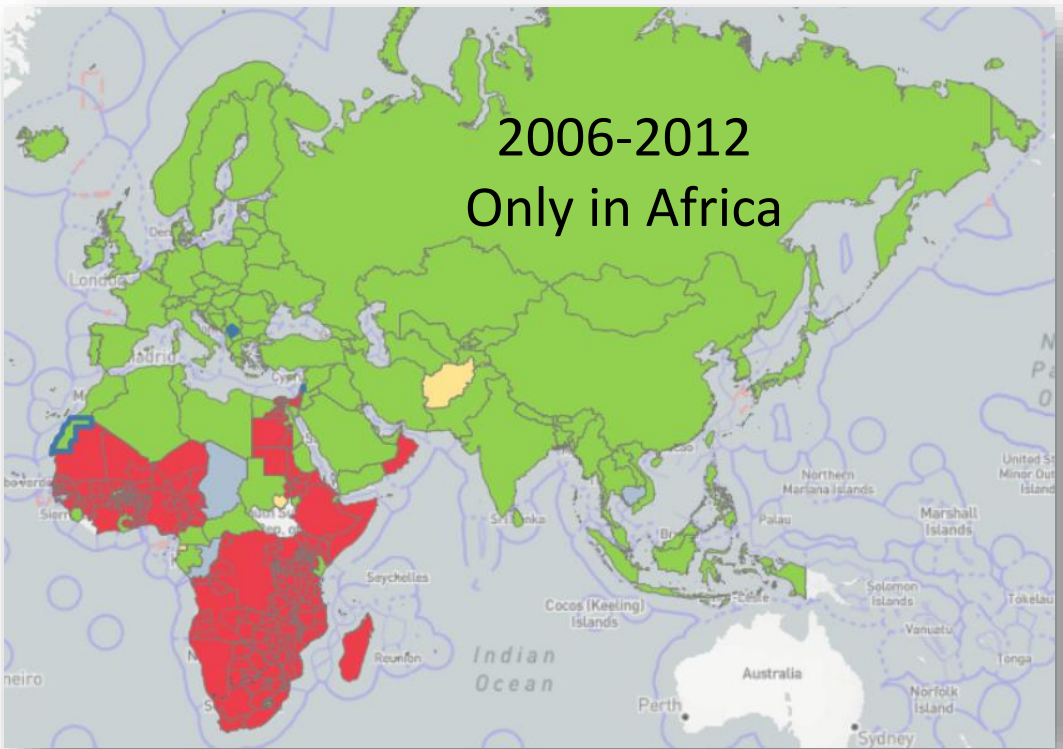
Regional Animal Health Coordinator
WOAH Sub-Regional Representation for South-East Asia

Fifth Virtual LSD Coordination Meeting for South-East Asia
19 December 2024 (2 PM – 4 PM, Bangkok time)

Outline

- Global and regional LSD situation
- Highlights of WOAAH activities in response to LSD Outbreaks in Asia and Pacific
- Implementation of LSD Coordination Meeting Recommendations
- Lessons Learnt
- ASEAN LSD Prevention and Control Strategy
- Way Forward

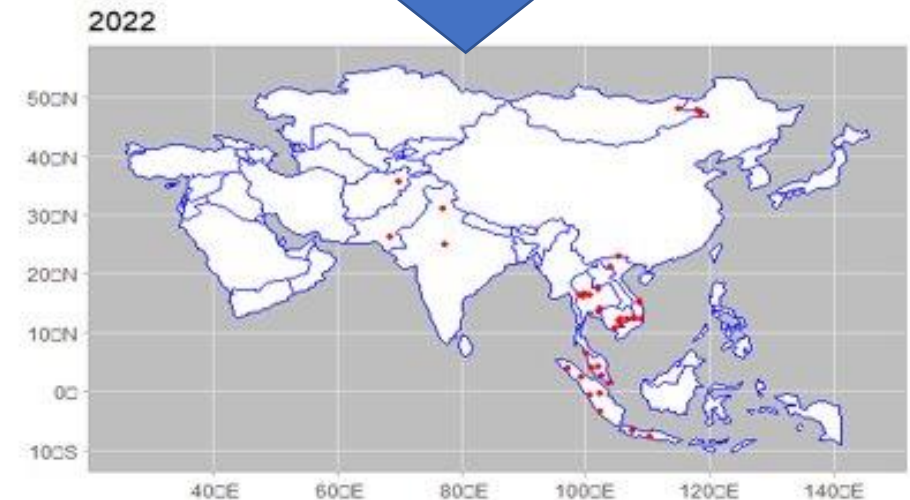
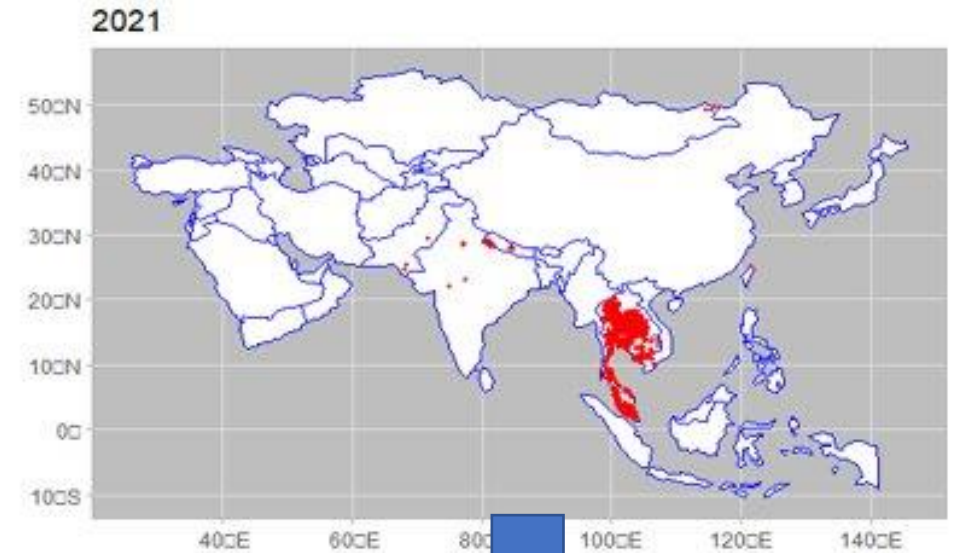
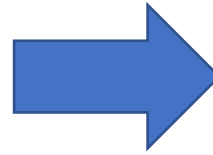
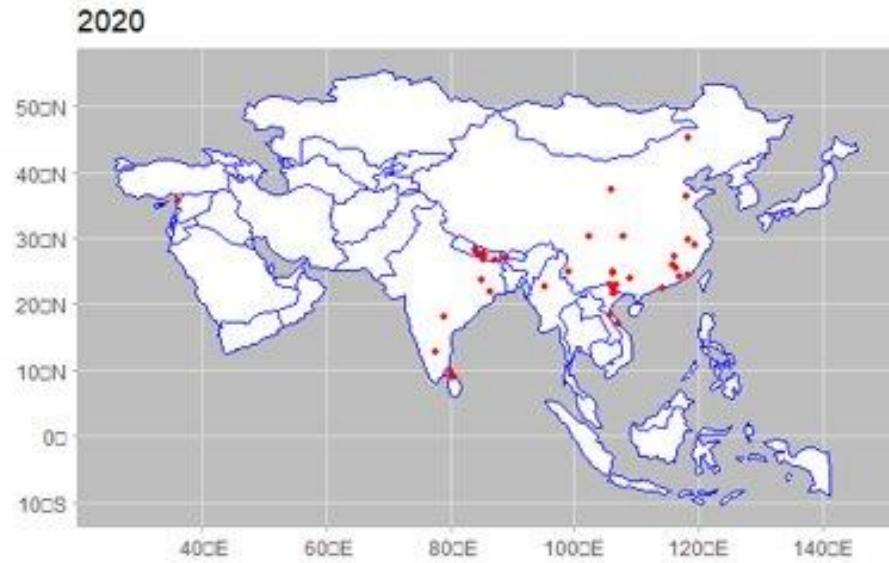




**LSD situation
based on
Member's
report to
WOAH**



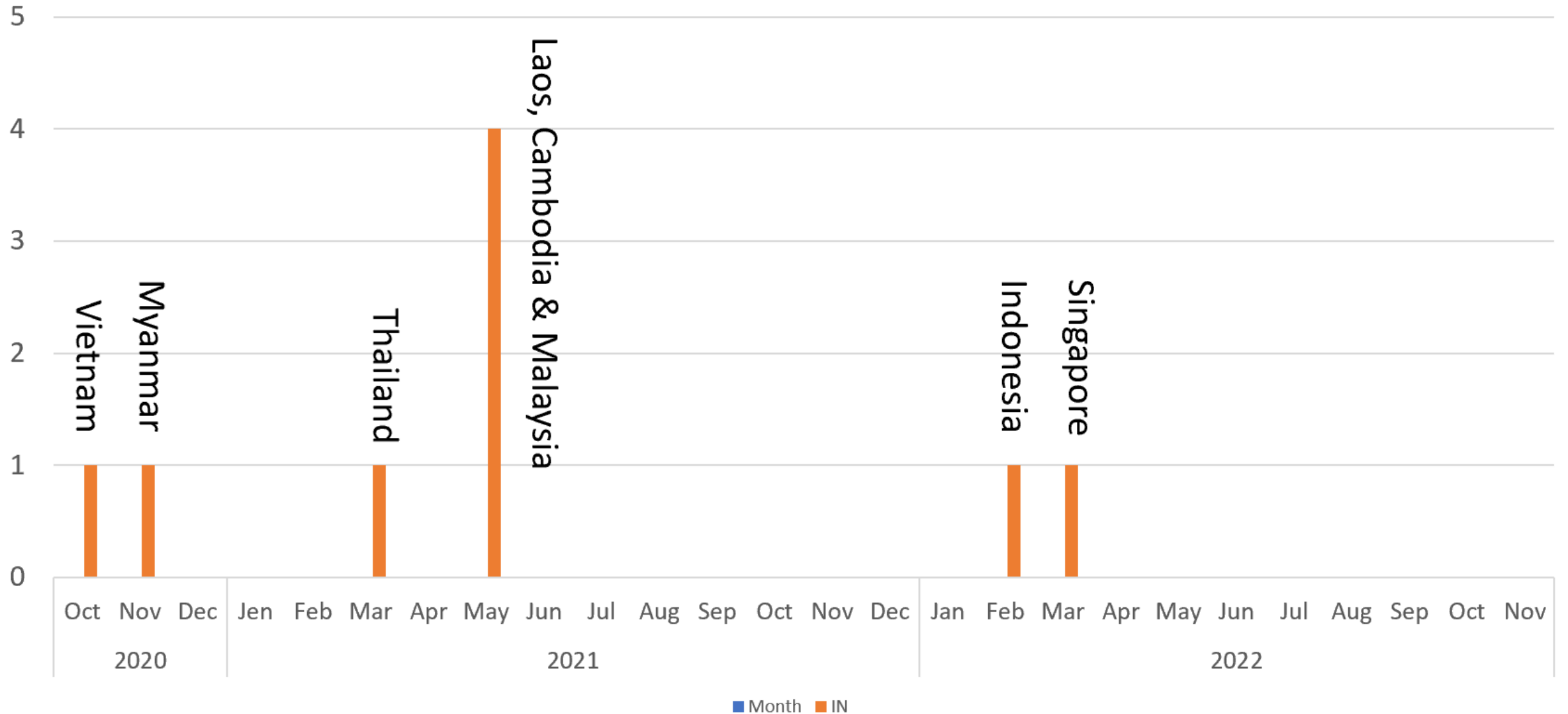
LSD situation in Asia Pacific region

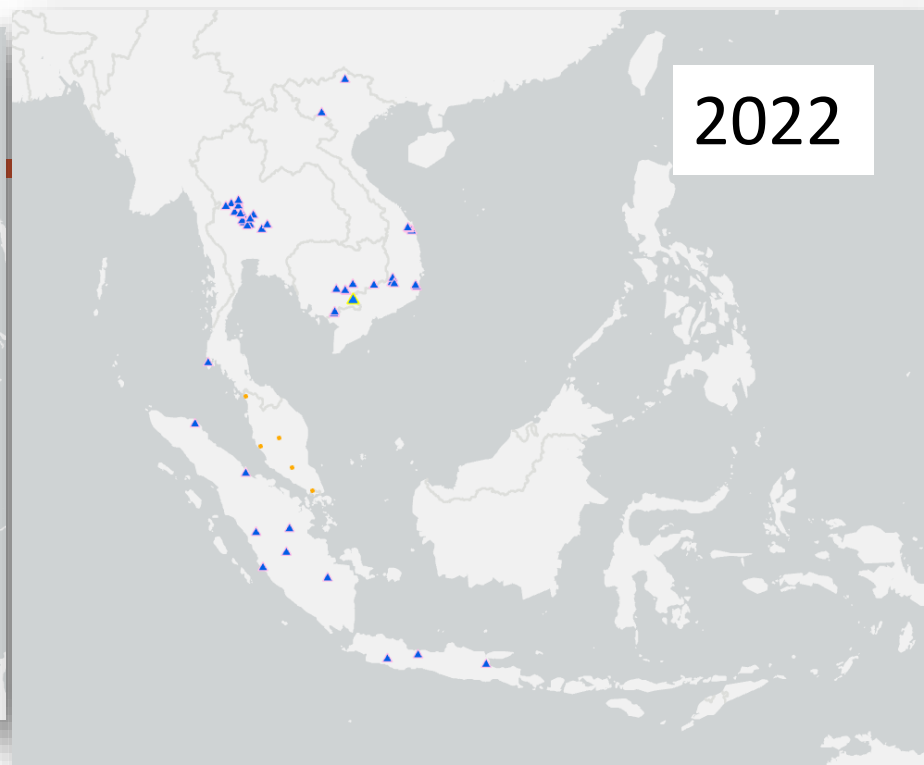
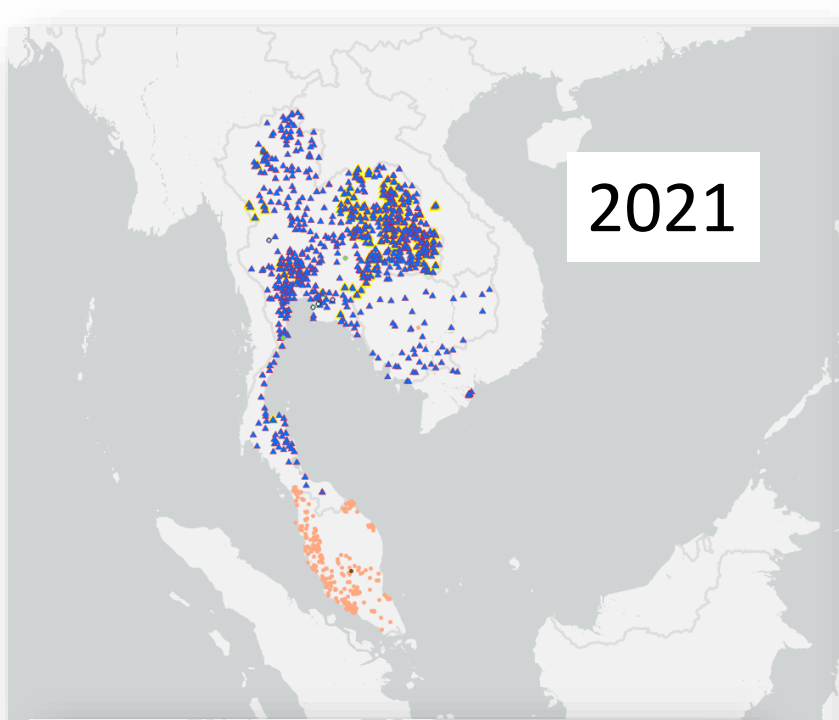


- First occurrence of LSD in Asia - Pacific region in 2019
- 19 Members officially reported LSD outbreaks in Asia – Pacific region
- Republic of Korea reported the first occurrence of LSD in 2023

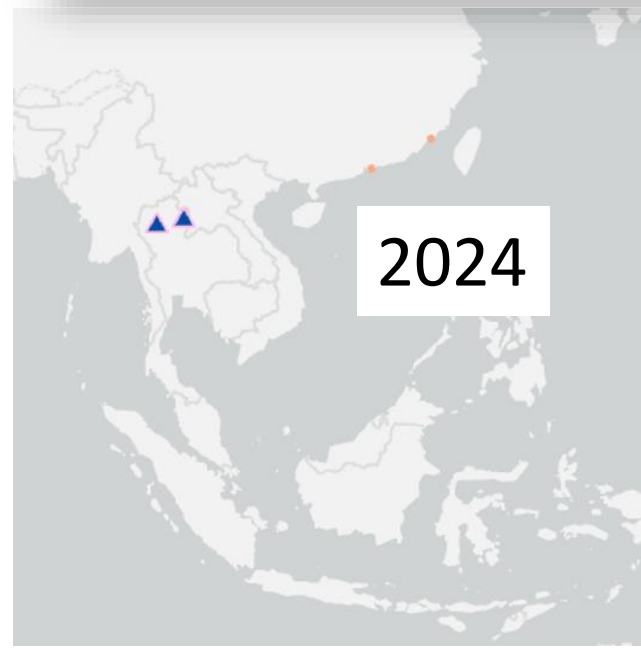


LSD situation in ASEAN region





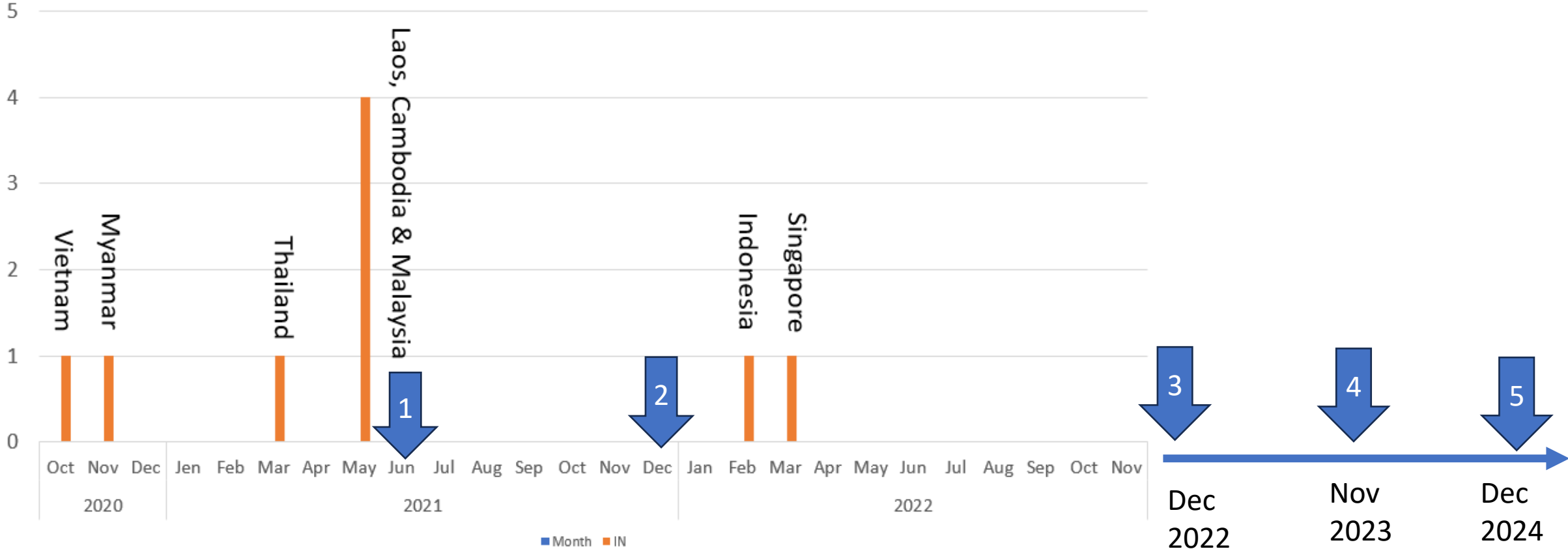
- ▲ Village, Buffaloes
- ▲ Village, Cattle
- Farm, Cattle
- Farm, Bos gaurus
- Forest, Bos frontalis
- Backyard, Cattle



**LSD situation
in Southeast
Asia based
on Member's
report to
WOAH**

LSD Coordination Meeting for South-East Asia

Submitted IN (by event start date)



Highlights of activities in response to LSD Outbreaks



Conduct
Webinars

Conduct trainings and studies; develop Guidelines, strategies & communication materials

Organise Coordination Meetings

Knowledge Sharing - LSD Webinars



Emergency Response
17 July 2020



Laboratory Diagnostics
24 September 2020



General Consultation
25 Sep 2020



Regional Situation Update
21 Dec 2020 & 26 Aug 2021



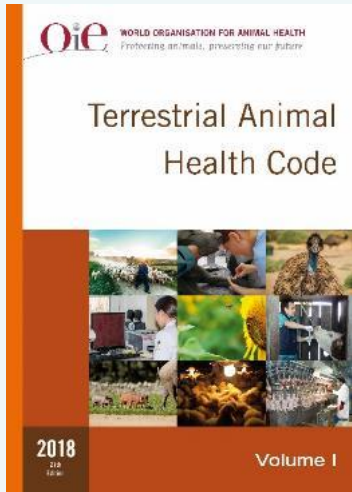
Support to Members



Advice through emails on Do's and Don'ts and provide source of resources including Ref Labs

- Affected countries
- Neighbouring countries at risk of incursion

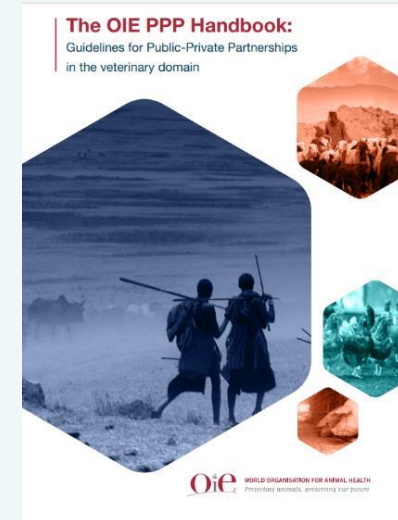
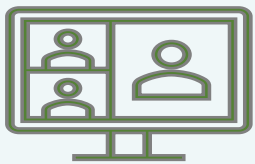
WOAH terrestrial Animal Health Code and Terrestrial Manual (Both horizontal and Vertical Chapter - [Chapter 11.9.](#) and Chapter 3.3.12: [Lumpy skin disease](#))



Facilitate technical virtual consultation between affected countries and LSD Experts

Network with WOAH Reference Laboratories

Other advice and support as and when sought by Members



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 6-9 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 subcuticular 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 the 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/ahis/lumpy-skin-disease/

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Protecting animals, promoting our future

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 6-9 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.



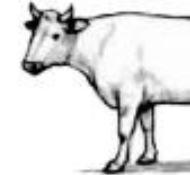
For more information:

OIE regional webpage on LSD:
www.oie.int/en/ahis/lumpy-skin-disease/
FAO, 2017. Lumpy skin disease field manual - A manual for veterinarians.
www.fao.org/3/i4500e/i4500e01.htm
Check the latest information on the evolution of LSD in the region.
Consult the OIE World Reference Laboratory (WRL) on LSD:
www.oie.int/en/ahis/lumpy-skin-disease/

Contact us:

OIE Asia and Pacific Representative Office
107 South Road, Singapore 117602

Lumpy skin disease a threat to the region



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Protecting animals, promoting our future

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 subcuticular and prefrontal lymph nodes (swollen palpable).
- Appearance of firm cutaneous nodules, nodular skin lesions of 2-6 cm in diameter:
 - Cutaneous 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.
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- 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 buffaloes. 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 biting 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 raised 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.
Stop cattle movement from the farm.
- Separate suspected case(s) from the rest of the herd.
- Monitor the health of animals everyday in order to identify sick animals.
- Seek advice from vets and paravets to provide supportive treatment.

How to prevent and control LSD in your farm?

- Only buy healthy animals from trusted sources.
- Only allow visitors to your farm for essential services.
- Keep farm sheds free from breeding sites for insects such as standing water and dung.
- A vaccine exists to protect your animals.
Contact your local veterinarians or official Veterinary Services for information on the vaccine.

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

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LSD Coordination Meetings for South-East Asia

First Virtual LSD Coordination Meeting

Provide LSD situation updates & share tools

11 June 2021

Enhance reporting by Members
Develop FAQ on LSD vaccination
Organize Coordination meeting focused on LSD vaccination

Second Virtual LSD Coordination Meeting

LSD Vaccination

16 Dec. 2021

Develop ASEAN LSD Prevention and Control Strategy
Enhance LSD vaccination

Third Virtual LSD Coordination Meeting

Provide situation updates

16 Dec. 2022

Conduct studies to understand the epidemiology and impact of LSD;
Enhance LSD diagnostic capacity; LSD vaccination and emergency preparedness and
Enhance coordination & collaboration

Fourth LSD Coordination Meeting, Bangkok, Thailand

Development of ASEAN LSD Prevention and Control Strategy

28 – 30 Dec. 2023

Enhance LSD surveillance and diagnostic capacity – PT;
Advocacy on LSD vaccination;
Finalise the strategy with M&E framework
Enhance coordination and collaboration

Fifth Virtual LSD Coordination Meeting

Situation updates, share study findings and new tools

19 Dec. 2024



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Capacity building Programme – LSD vaccination

- [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/>



vaccines



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

Assessment of LSD vaccination in South-East Asia – vaccine usage and adopted strategies



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Video on LSD vaccination



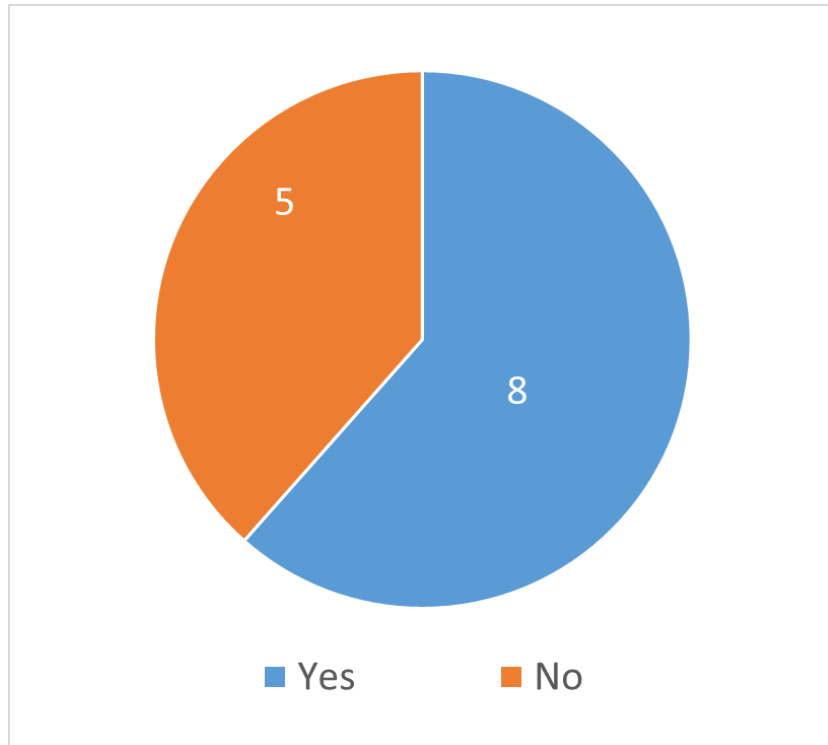
Live action video: Protecting farmers livelihood through LSD vaccination



Animated video: Guidance on using good quality vaccine for LSD control

LSD Vaccine Registration and Procurement

Have your country procured or produced LSD vaccines?



All 8 Members reported having a formal vaccine registration process

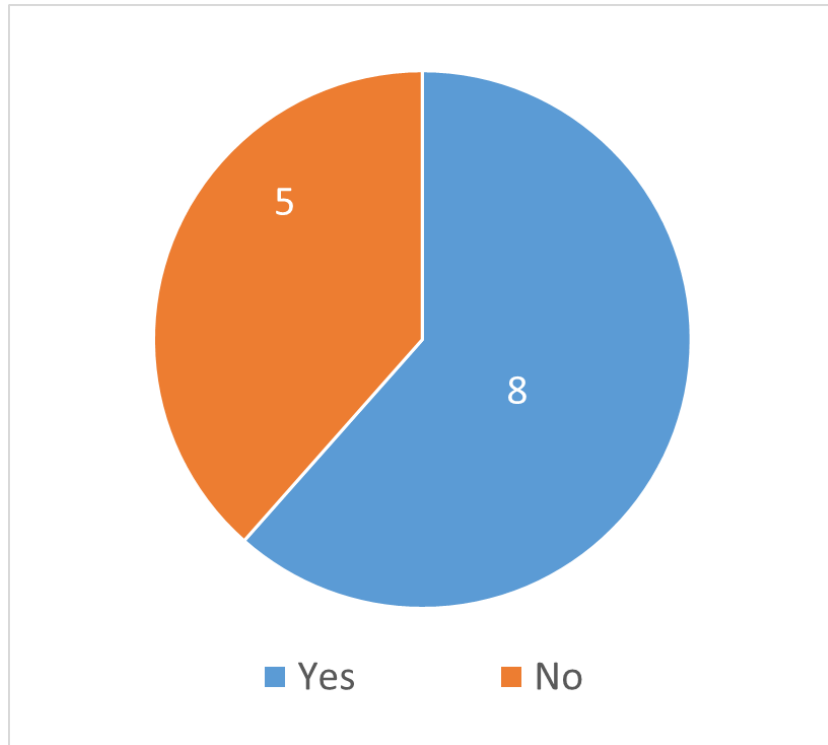
Six Members reported having a emergency process to register vaccine

- 1 week
- 1 - 2 years
- 3 months
- 45 days
- 6 Months
- 2 month
- 3 Months

What is the duration of the registration process for LSD vaccines?

LSD Vaccine Registration and Procurement

Have your country procured or produced LSD vaccines?



Seven Members reported having a formal procurement process

Eight Members reported having emergency process to procure vaccine during incursion of new disease such as LSD

- 1 Month
- 1 - 2 Month
- 2 months
- 3 Months - 3
- Few Months
- 9 Months??
- Not sure??

How long did it take to procure LSD vaccines when you had the first outbreak LSD? (number days, weeks, months)

LSD Vaccine Registration and Procurement











What types of vaccines is available/ procured/ produced for control of LSD in your country?

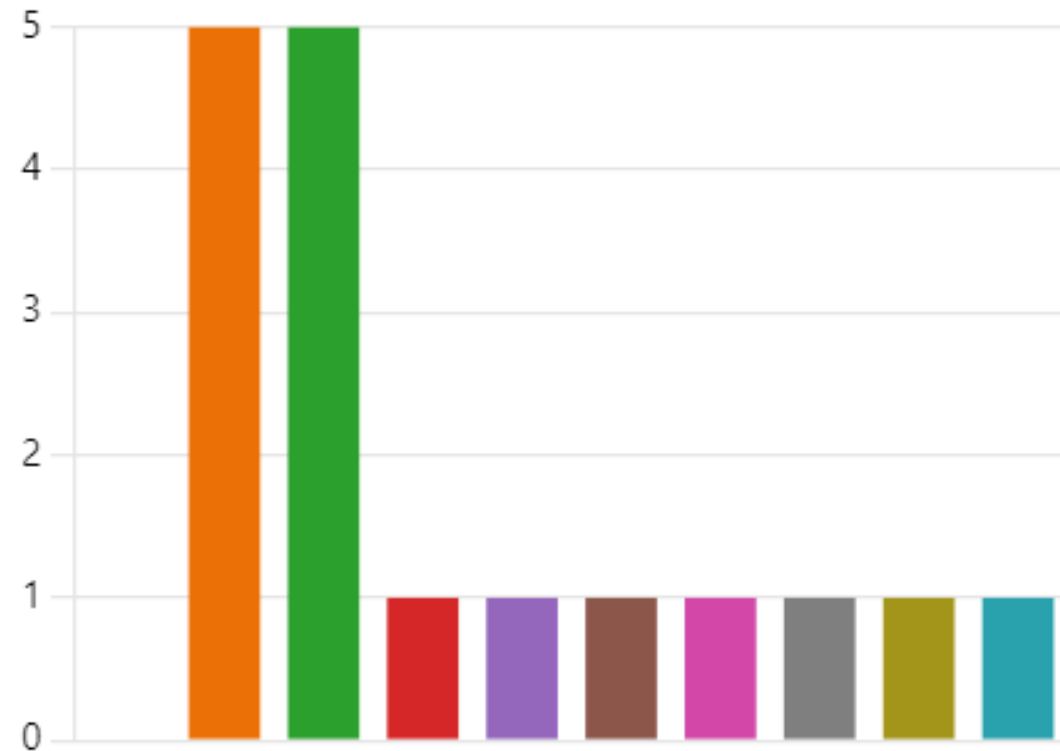
- Live Attenuated LSDV vaccines/ ... 6
- Live Attenuated Gorgan Goat Po... 1
- Live Attenuated Sheep pox virus... 1
- Inactivated vaccines 2
- No LSD vaccine available/ procu... 1



LSD Vaccine Registration and Procurement




If your country procured live attenuated LSD virus vaccines/ homologous LSDV vaccines (Neethling strain), what are the brand names?

 LumpyShield-N®	0
 LumpyVax® (MSD)	5
 MEVAC LSD®	5
 Bovivax LSD-N®	1
 Lumpi-ProVaInd®	1
 LSD-NDOLL®	1
 Lumpyvac®	1
 Others	1
 Not procured any live attenuate...	1
 Locally produced live attenuate...	1



LSD Vaccine Registration and Procurement







If your country procured live attenuated Gorgan Goat Pox Virus (GTPV) vaccines, what are the brand names?

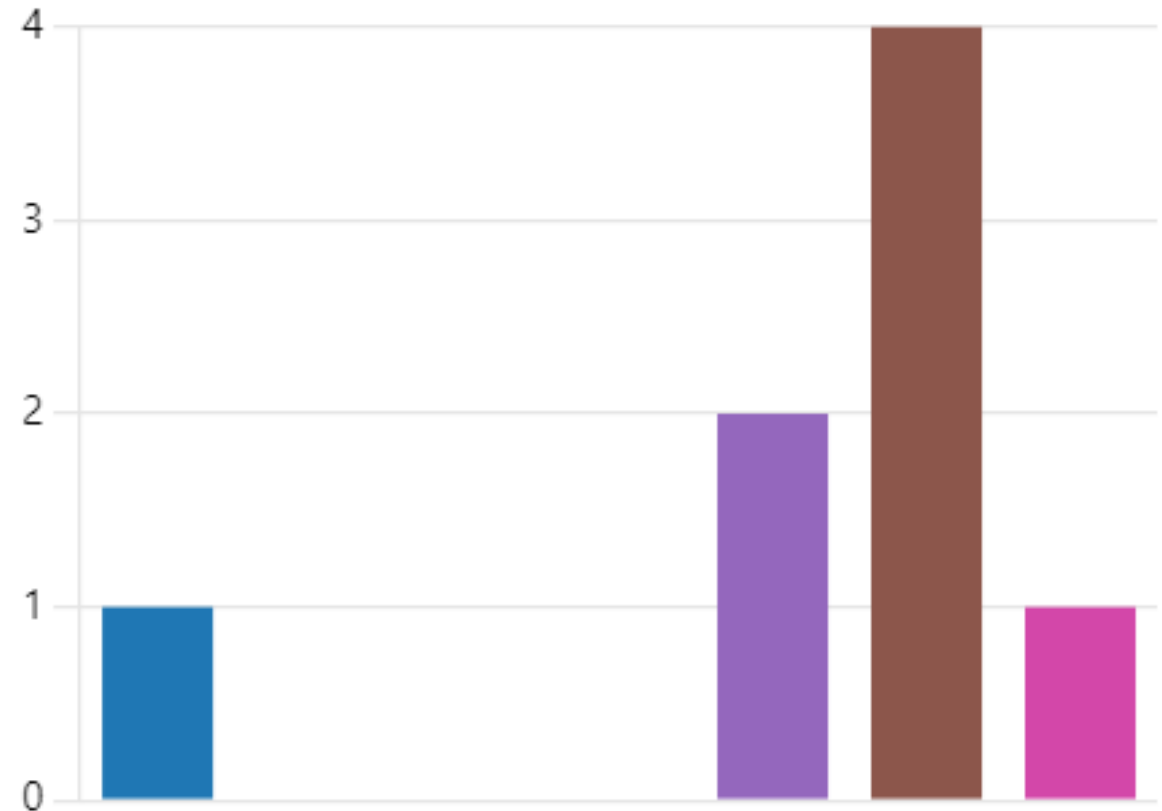
	LumpyShield-G®	1
	Not procured any live attenuate...	5
	Locally produced GTPV vaccine	2



LSD Vaccine Registration and Procurement

If your country procured live attenuated Sheep Pox Virus (SPPV) vaccines, what are the brand names?

 JovivacStrong®	1
 Sheep Pox Cultyril Dry®	0
 Poxdoll®	0
 Poxvac®	0
 Others	2
 Not procured any attenuated sh...	4
 Locally produced live attenuate...	1



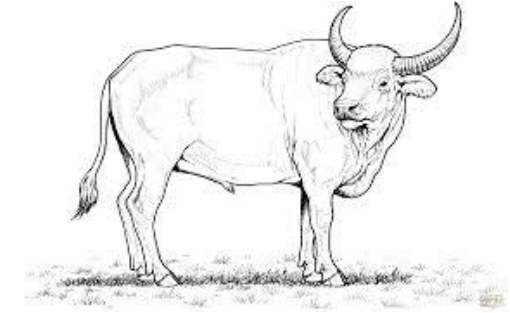
What support would you like WOAAH and other partners to provide to enhance LSD in vaccination in your country?

- ✓ Coordinate LSD vaccination in border areas;
- ✓ Training to improve professional capacity for veterinary staff
 - Training animal health staff in vaccine delivery and administration
 - Field training on LSD vaccination in the extensive farming situation
- ✓ Determine the variation of circulating virus strains
- ✓ Assistance in the development of LSD Prevention & Control Program, including LSD vaccination guidelines;
- ✓ Regional vaccine bank support if possible/ access to LSD Vaccine Bank
- ✓ Support for good equipment- for transport, administration and cold chain.
- ✓ Epidemiological investigation and disease reporting
- ✓ Study of combination of LSD and FMD/other (Anthrax, Brucellosis, HS) vaccinations



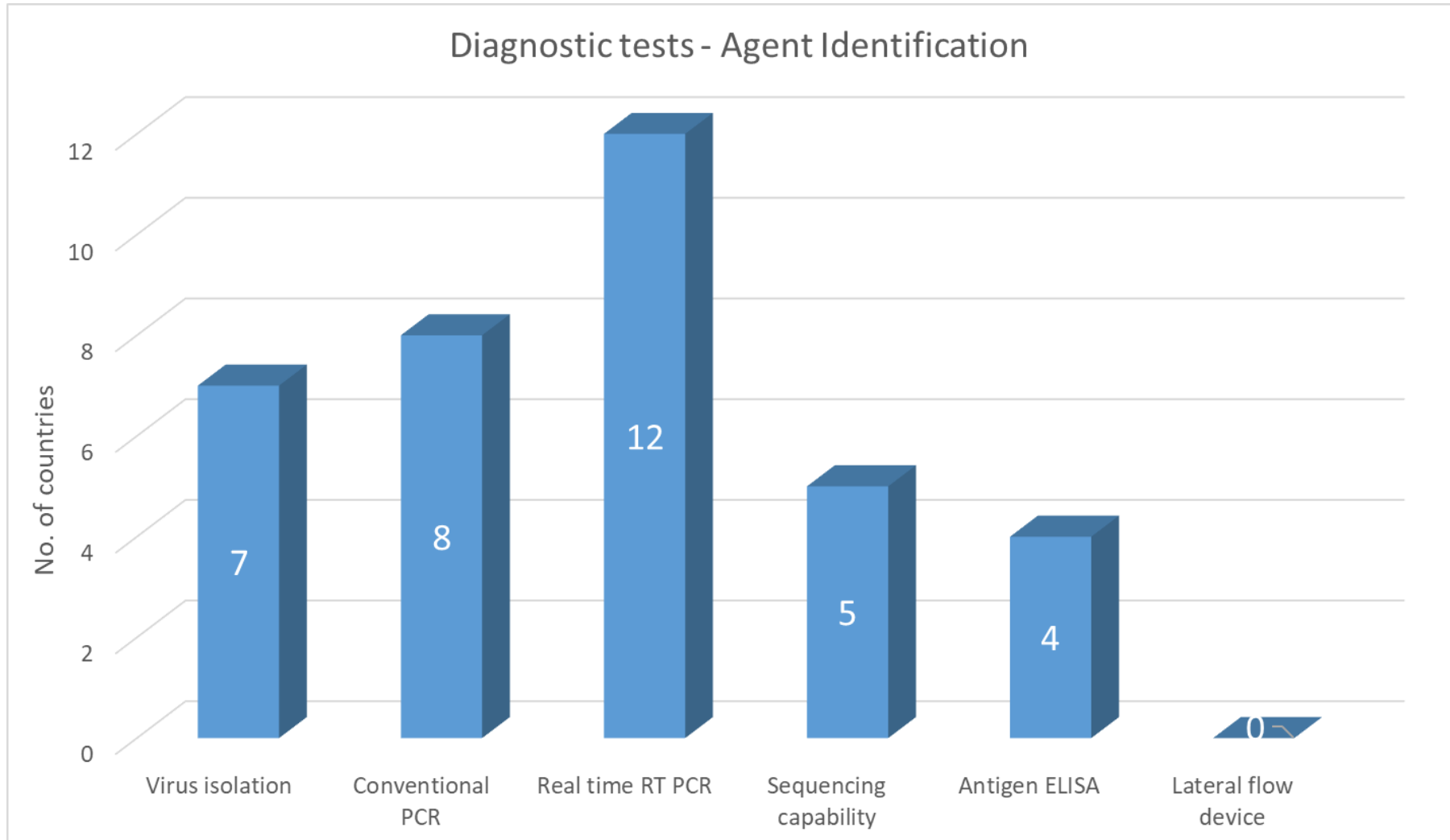
Capacity building programme – Enhancing laboratory diagnostic capacity

- Laboratory capacity building
 - Assessed the LSD diagnostic capacity of Members
 - Supported proficiency testing programme for six laboratories in South-East Asia with WOAHA Reference Laboratory (Sciensano), Belgium
- Develop ASEAN LSD Prevention and Control Strategy
- LSD Impact Assessment Study



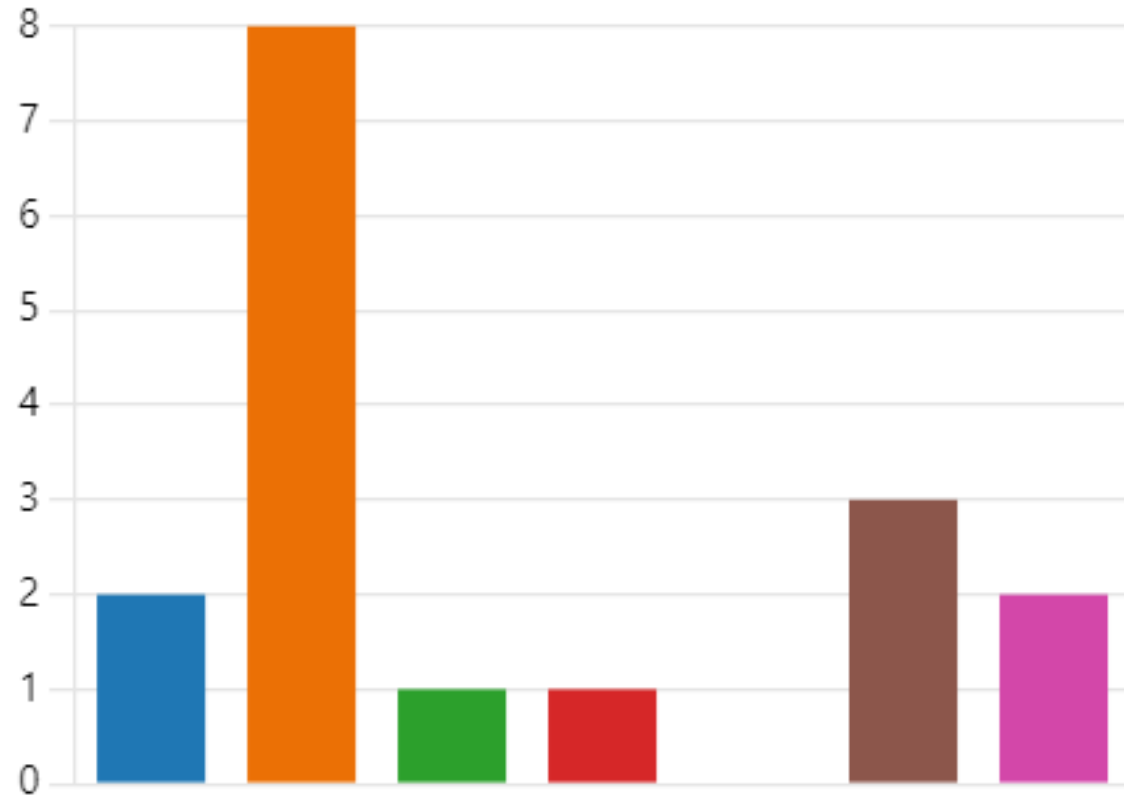
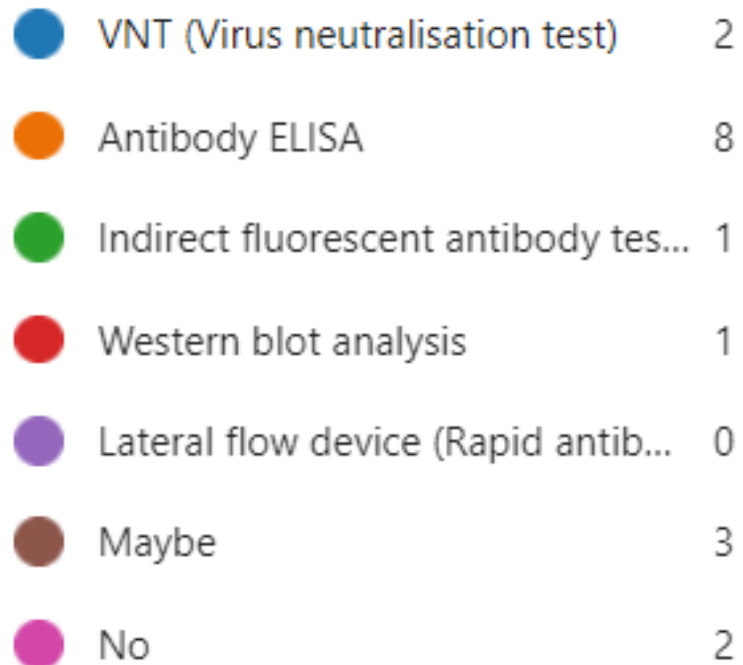
LSD Diagnostic tests – agent identification

Does your country have the capacity to conduct the following laboratory tests for (LSD virological or molecular) agent identification?



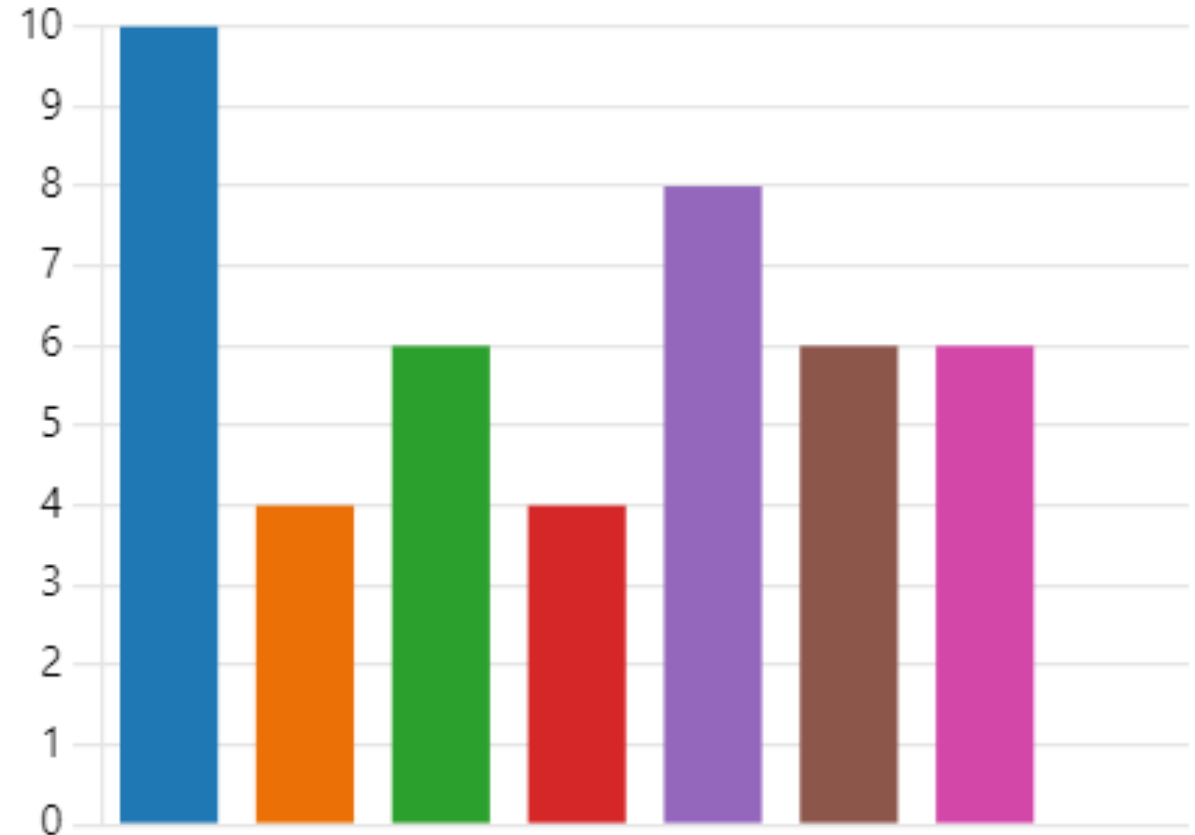
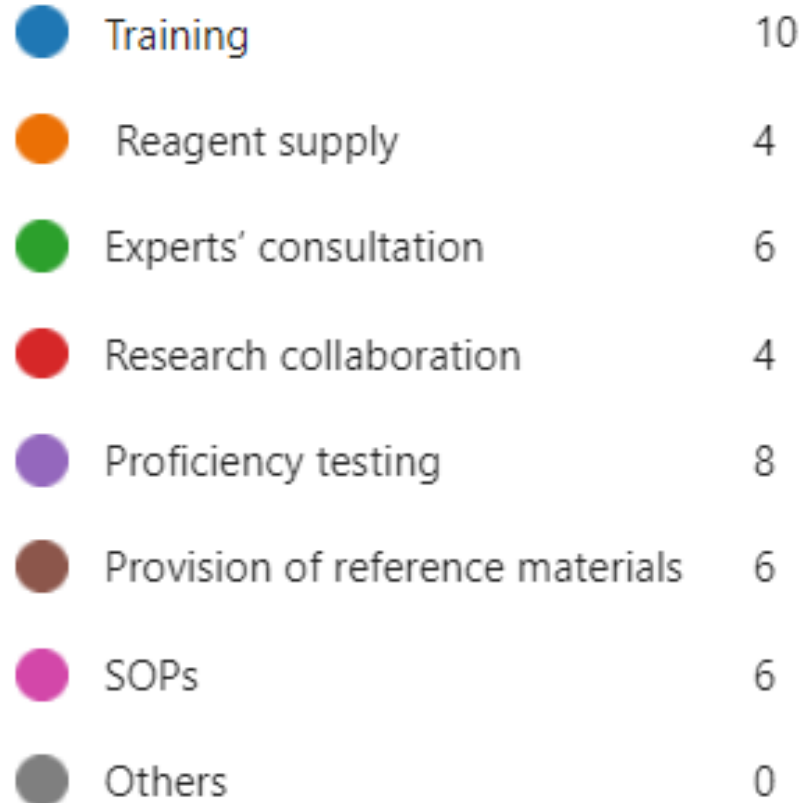
Diagnostic tests – Immune response

Does your country have the capacity to conduct the following laboratory tests for detection of immune response (LSD serological tests)?



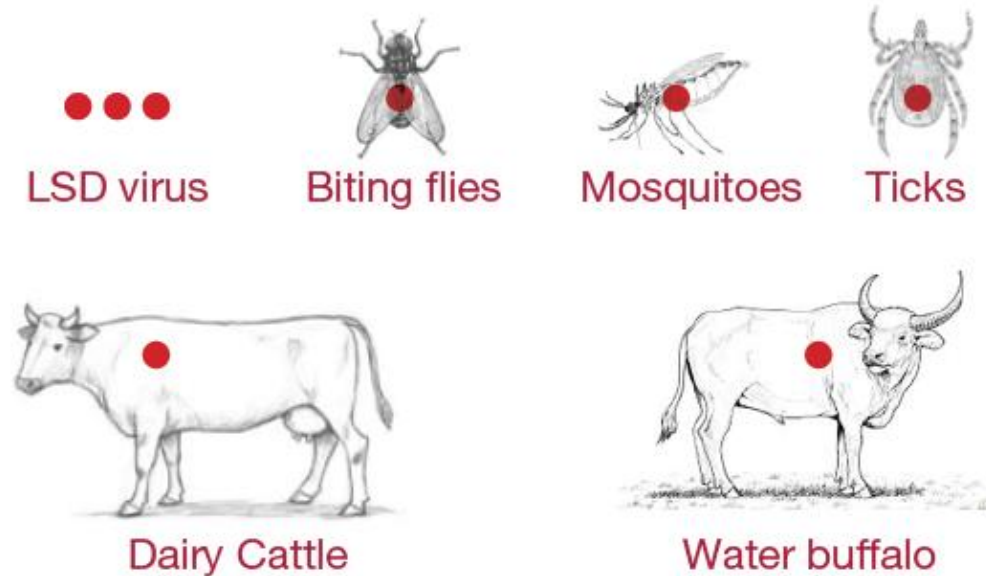
Expected technical support

Technical support expected from WOAAH/ FAO/ Partners and Reference Laboratories?



Capacity building programme – Study to assess impact of LSD

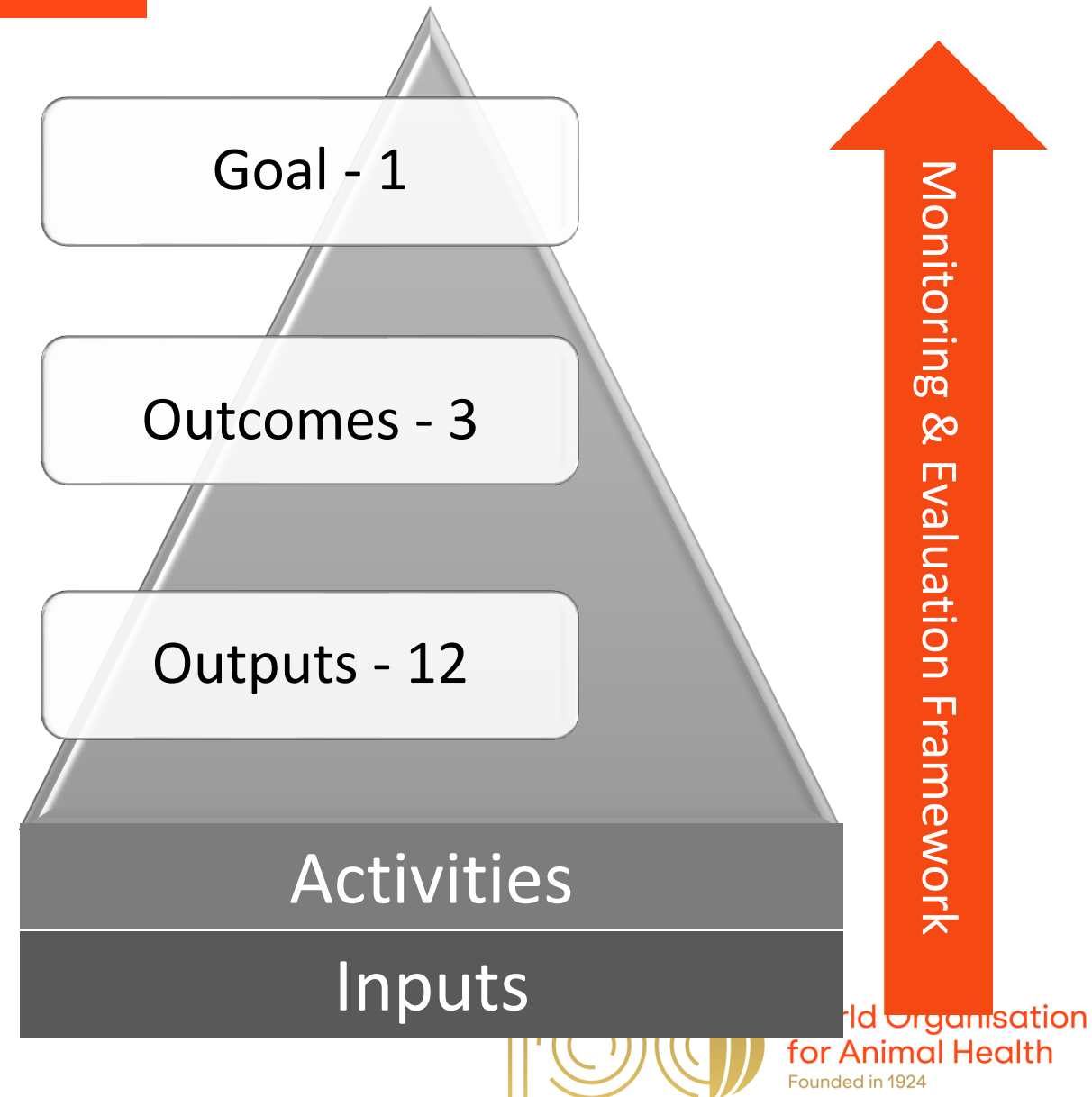
- Study to assess impact of LSD with the following objectives:
 1. To understand the epidemiological characteristic of the disease including the risk factors for introduction and spread of LSD;
 2. To assess management and control of LSD by the stakeholders along the value chain including farmers, traders, and vet. and identify best practices – Thailand and Bangladesh;
 3. To assess the socio-economic impact of LSD outbreaks on key stakeholders along the value chains – Thailand and Bangladesh.



Capacity Building Programme

ASEAN LSD Prevention and Control Strategy

Endorsed by 32nd ASWGL Meeting in July 2024, SOM-AMAF in Aug 2024 and AMAF in Oct 2023



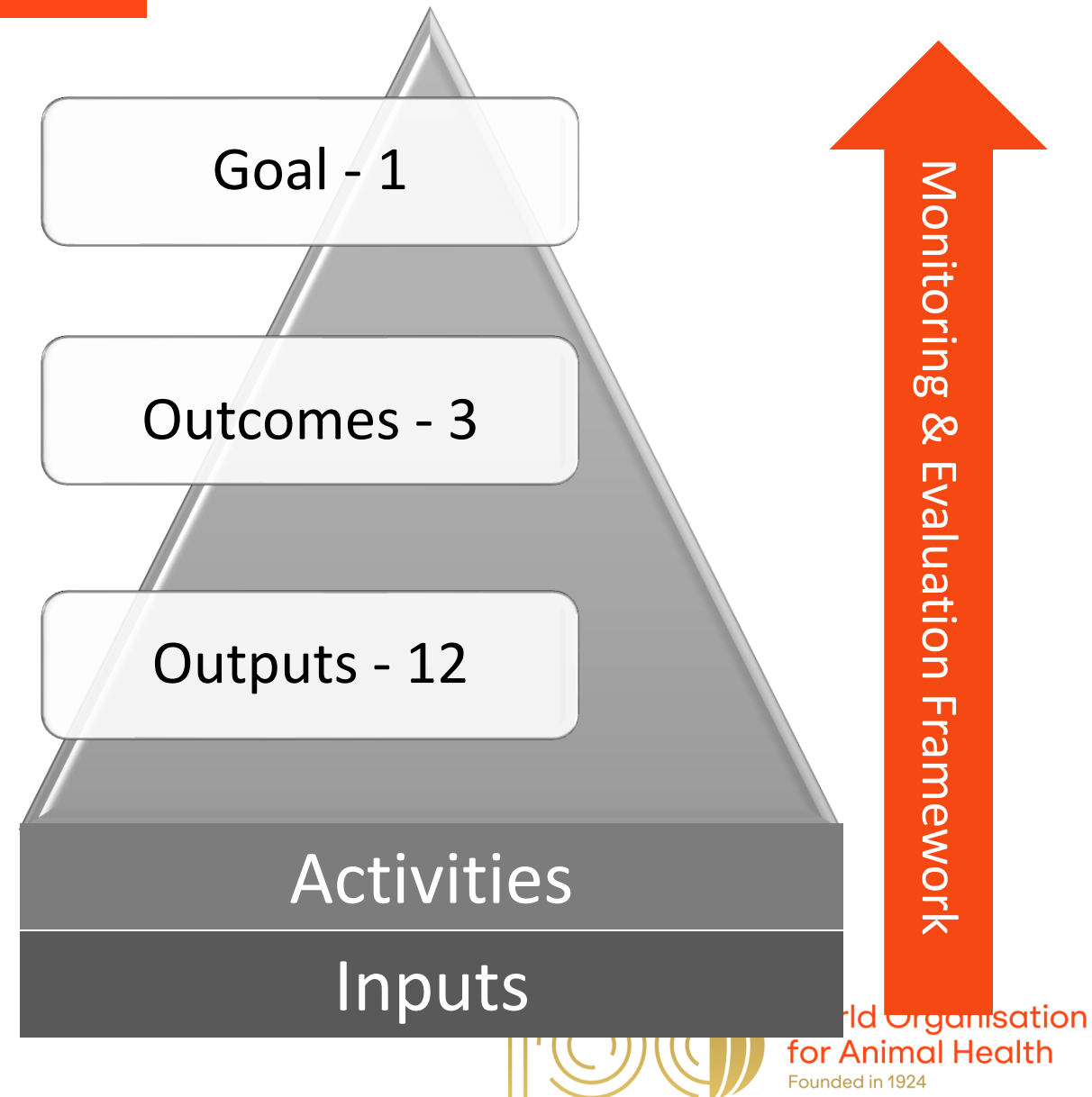
Lessons Learnt

- Introduction of emerging TADs in SEA – Biosecurity at regional and national level?
- Rapid spread of LSD – Emergency preparedness?
- Access to quality vaccines – challenges and measures to enhance access to quality with relevant guidelines and FAQs
- Knowledge sharing – Webinars - emergency response, diagnostics, available tools
- Building a network with Global/ WOAHA Experts and Members
- Enhancing Laboratory diagnostic capacity – PT programme and support Members based on needs
- Coordination Meetings – provide situation updates, information sharing, learning from each other and enhancing collaboration
- Guidelines and tools – available guidelines and tools with WOAHA and other Partners

Capacity Building Programme

ASEAN LSD Prevention and Control Strategy

Endorsed by 32nd ASWGL Meeting in July 2024, SOM-AMAF in Aug 2024 and AMAF in Oct 2023



Rationale for development of the strategy

- As with any other TADs, LSD can be effectively controlled when countries with similar epidemiological situations work together in a coordinated manner to control the disease.
- The [GF-TADs Strategy for 2021-2025](#) recommends the development of strategies for priority TADs at regional and sub-regional levels to address their priorities for the control and prevention of TADs.
- The 12th RSC for GFTADs recommended LSD as priority TADs
- Considering the wide spread of LSD in South East Asia (8 out of 10 countries affected) and the importance of regional coordination for the effective control of LSD:
 - The Second LSD Coordination Meeting and 30th ASWGL Meeting in June 2022 recommended the development of the ASEAN LSD Prevention and Control Strategy



Process for Strategy development



ASEAN LSD Strategy



ASEAN LSD Prevention and Control Strategy

Vision:

The ASEAN region is free from LSD by 2030.

Goal:

To achieve regional control and elimination of LSD that will result in a reduction of the adverse impact of LSD in the ASEAN region

The achievement of the goal will be indicated by:

- free country and zones maintain LSD free status (through self declarations),
- reduction in the number of countries and territories affected by LSD,
- reduction in number of LSD outbreaks within affected countries and territories/ reduced virus circulation in the region



ASEAN LSD Prevention and Control Strategy

GOAL

To achieve regional control and elimination of LSD that will result in a reduction of the adverse impact of LSD in the ASEAN region.



OUTCOMES

1. Strengthened capacity for prevention and control of LSD and other emerging TADs

3. Improved ownership and enabling environment at national level

4. Ensured sustainable and effective LSD control through multi-sectoral and multi-disciplinary partnerships



OUTPUTS

1.1: Fit for purpose LSD integrated surveillance system established

1.2: Strengthened lab. diagnostic system

1.3: Improved movement control, quarantine and biosecurity

1.4: Enhanced LSD vaccination and access to quality vaccines

1.5: Capacity building programmes strengthened

2.1: Country ownership of the LSD and other TADs control enhanced

2.2: National legal and regulatory framework is enhanced

2.3 Cost efficient synergies with other livestock production /animal health/other TADs control activities developed

2.4 Enhanced communication, advocacy and stakeholder engagement

3.1: Engagement and partnership with relevant key stakeholders, including the private sector strengthened

3.2: Engagement and partnership with relevant key stakeholders, including the private sector strengthened

3.3 Sustainable funding mechanism promoted

ASEAN LSD Prevention and Control Strategy

Outcome	Outputs
Outcome 1: Strengthened capacity for prevention and control of LSD and other emerging TADs	1.1: Fit for purpose LSD integrated surveillance system established
	1.2: Strengthened laboratory diagnostic system
	1.3: Improved movement control, quarantine and biosecurity
	1.4: Enhanced LSD vaccination and access to quality vaccines
	1.5: Capacity building programmes strengthened



ASEAN LSD Prevention and Control Strategy

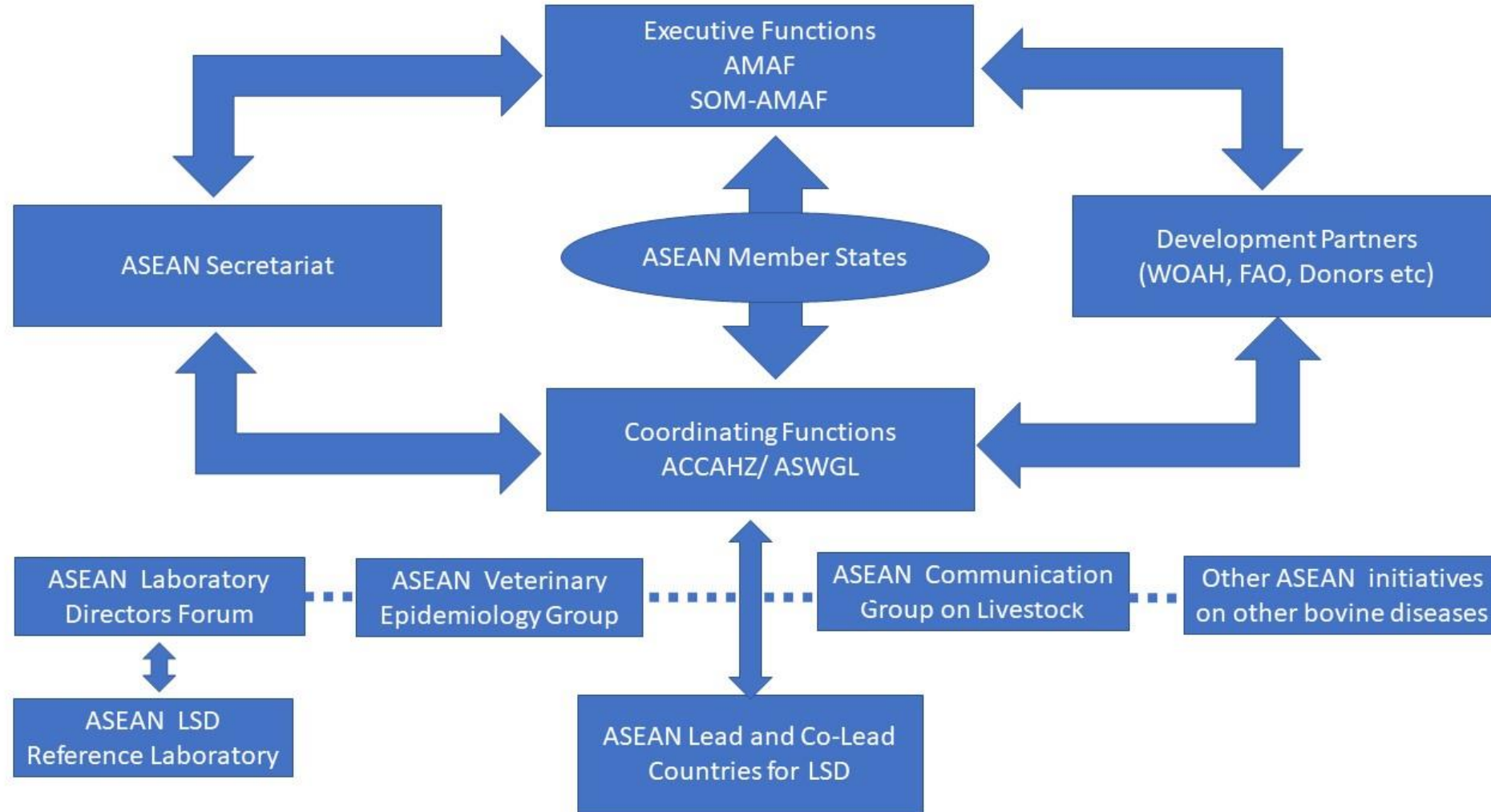
Outcome	Outputs
Outcome 2: Improved ownership and enabling environment at national level	2.1: Country ownership of the LSD and other TADs control enhanced
	2.2: National legal and regulatory framework is enhanced
	2.3 Cost efficient synergies with other livestock production /animal health/other TADs control activities developed
	2.4 Enhanced communication, advocacy and stakeholder engagement

ASEAN LSD Prevention and Control Strategy

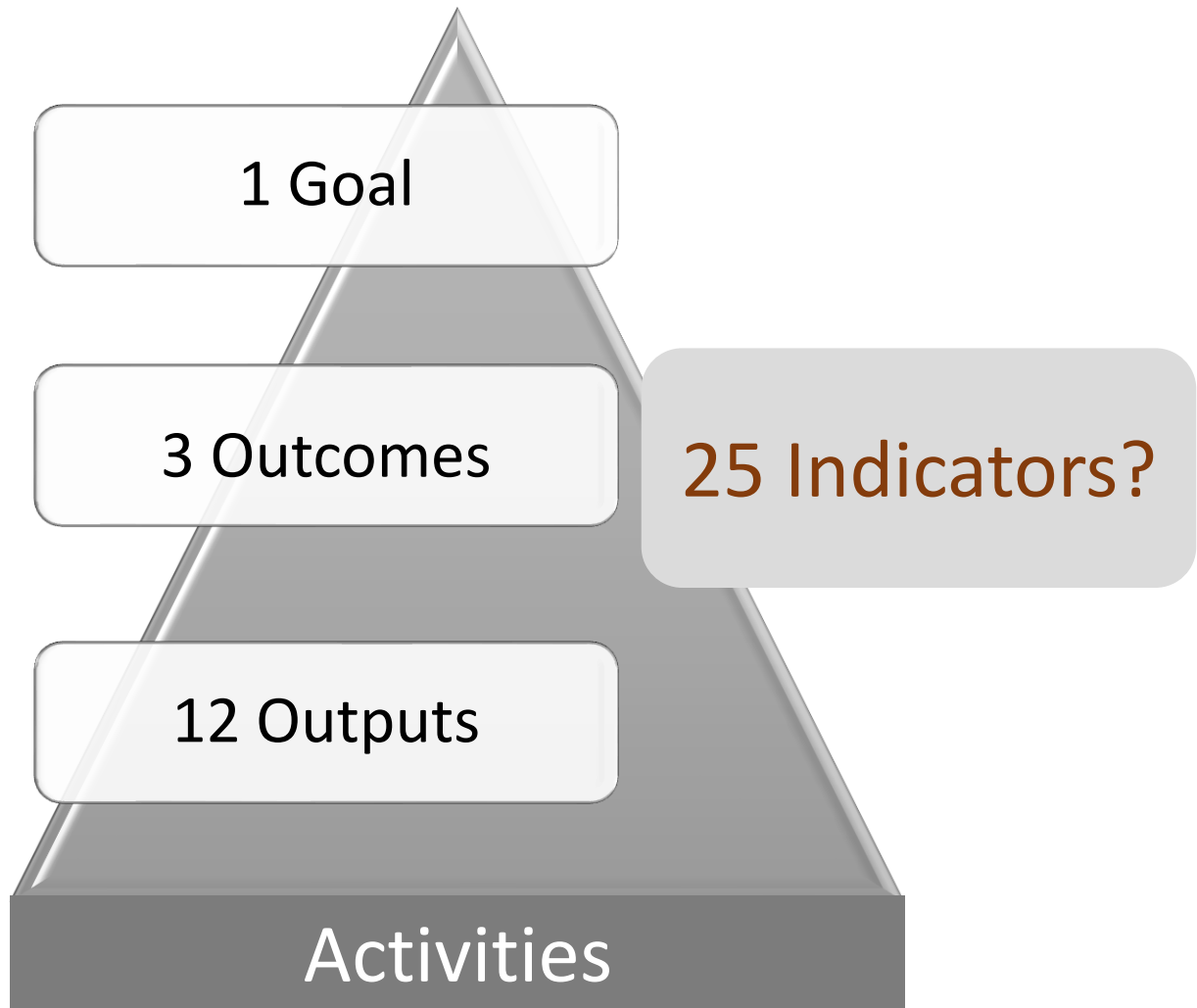
Outcome	Outputs
Outcome 3: Improved effectiveness and sustainability of LSD and other TADs control through multi sectoral and multi-disciplinary partnership	3.1: Engagement and partnership with relevant key stakeholders, including the private sector strengthened
	3.2: Multi-disciplinary collaboration and coordination for the prevention and control of LSD and emerging TADs strengthened
	3.3 Sustainable funding mechanism promoted



Implementation arrangement - ASEAN Mechanism



ASEAN LSD Prevention and Control Strategy



Monitoring &
Evaluation
Framework



ASEAN LSD Prevention and Control Strategy

ALPCS Monitoring and Evaluation Framework

APPS	Indicators	Baseline 2024	Targets	Measuring indicators
Goal	What we will measure to show how much progress we are making	Level of each indicator in 2024	What we aim to achieve by 2027 and 2030 for each indicator	Methods to collect and analyse data <i>when, how often, who is involved</i>
Outcomes				
Outputs				

LSD Prevention and Control activities at the regional and country level

M&E Framework for ALPCS

Results	Success Indicators	Baseline	Targets		Means of Verification	Assumptions and Risks
		2024	2027	2030		
Output 1.1: Fit for purpose LSD integrated surveillance system established	1.1.1: Average time for immediate notification of LSD, follow up reports, six-monthly and annual reports of disease situation by AMS (WAHIS)	Baseline to be obtained from WAHIAD ARAHIS not functional and LSD is not in the reporting list Baseline to be obtained through surveys	x	x	WAHIS Reports ARAHIS Reports	Funds are available on time to support <u>implementation of</u> LSD vaccination, laboratory diagnostics and surveillance activities AARL fully functional in line with endorsed TOR
Output 1.2: Strengthened laboratory diagnostic system	1.2.1: Number of designated ASEAN LSD Reference Laboratories (AARL) with endorsed TORs. 1.2.2: Number of laboratories in ASEAN region that participated in LSD proficiency testing with International <u>Reference Laboratories</u>	AARL not designated Six laboratories from four AMS participating in LSD PT programme with WOAHA Ref lab at Belgium Survey results for national lab activities			Designated AARL with endorsed TOR Proficiency test results AARL reports NAHL reports Partners reports	AARL, NAHL and partners allocate resources to strengthen surveillance including early detection and laboratory diagnosis AMS engaged in bilateral and multilateral agreement with neighbouring countries and



Next step – Way forward

- Endorsement by ASEAN Governing Bodies (ASWGL, SOM-AMAF, AMAF)
 - ASEAN LSD Prevention and Control Strategy
 - M&E Framework for ASEAN LSD Prevention and Control Strategy
- Rolling out ASEAN LSD Prevention and Control Strategy
 - Develop an Implementation Plan for ALPCS
 - Develop and agree with Baseline and Targets for the M&E indicators
 - Initiate and implement activities at the national and regional level



THANK YOU



Fifth Virtual LSD Coordination Meeting for South-East Asia
19 December 2024 (2 PM – 4 PM, Bangkok time)