



World Organisation  
for Animal Health  
Founded as OIE

# Status on LSD vaccination in South-East Asia

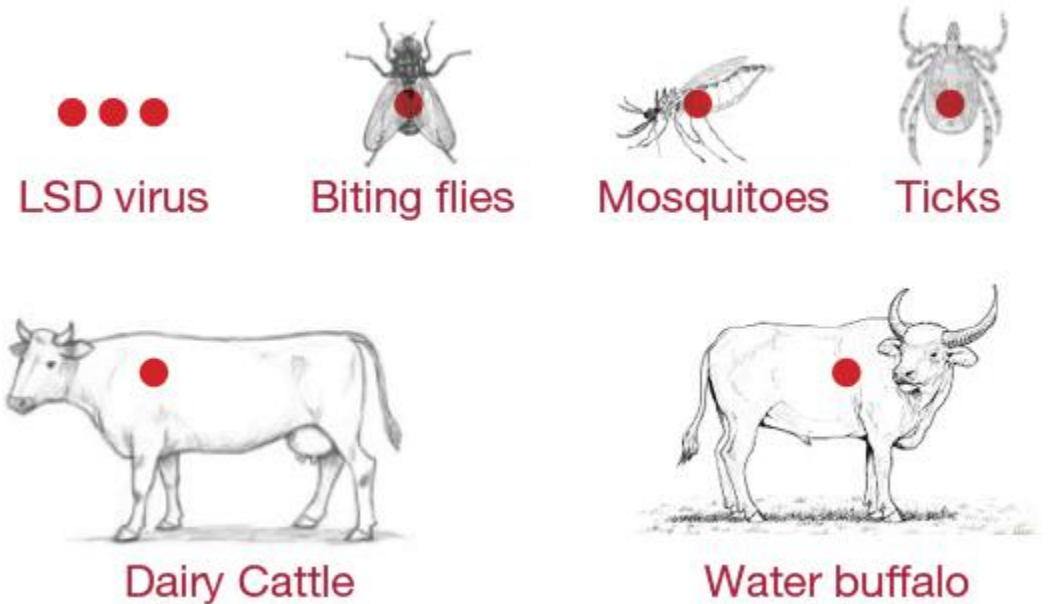
Karma Rinzin  
Regional Animal Health Coordinator  
WOAH SRR-SEA

Fourth LSD Coordination Meeting for South-East Asia  
28 – 29 November 2023, Bangkok, Thailand

# Outline

---

- Introduction
  - Objective of survey
  - Survey Methodology
- Findings
  - Diagnostic tests
  - Biosafety and Quality Control
  - Technical support
  - Logistics and challenges
- Conclusion and Way Forward



# Objective of the survey

---

- to gather general information about the current practices with regards to LSD vaccination programmes implemented at national level including vaccines used;
- to map the current LSD vaccination situation and strategies followed by the WOAHA Members;
- to identify potential challenges and critical gaps in accessing quality LSD vaccines and in implementation of LSD vaccination;
- to promote information sharing and discussion at regional level, thus improving the harmonization of LSD vaccination programmes.



# Survey Methodology

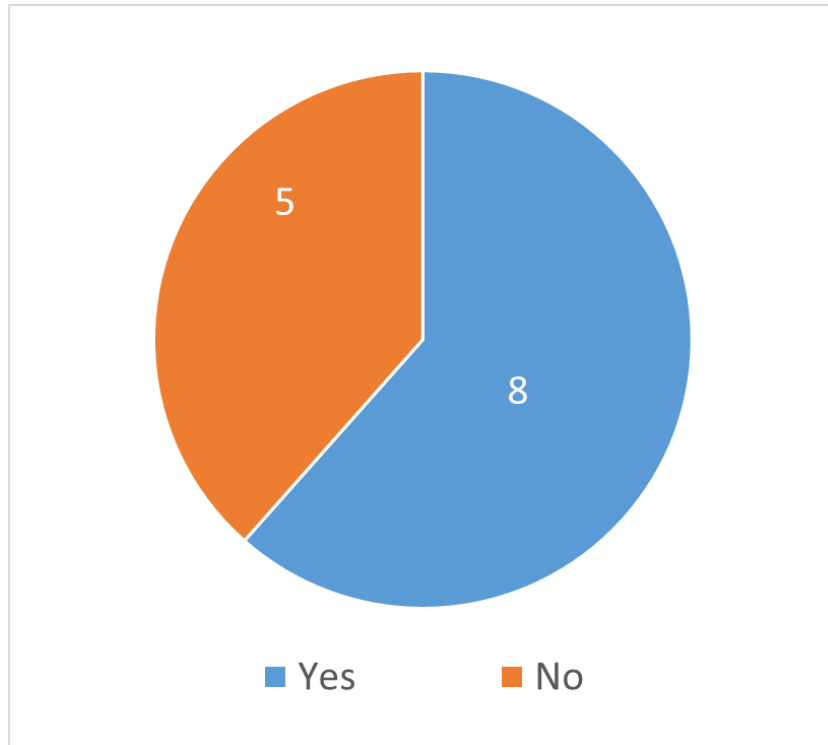
---

- Development of survey questionnaire:
  - WOAHA SRRSEA prepared the draft questionnaire
  - Questionnaire further improved with the inputs received from the Core Group and Advisory Group Members
- Questionnaire was shared to the Members in Microsoft Form with a request to submit their response virtually
- Members (13 Members) completed online questionnaire
  - 10 AMS, China, Mongolia and PNG
- Analysis and reporting
  - Three Members – LSD Free (Brunei, Philippines & PNG)
  - Five Members – did not import/ produced vaccines – Three Free countries + Singapore and Myanmar
  - Descriptive analysis performed
  - Report status and situation at the regional level



# LSD Vaccine Registration and Procurement

Have your country procured or produced LSD vaccines?



All 8 Members reported having a formal vaccine registration process

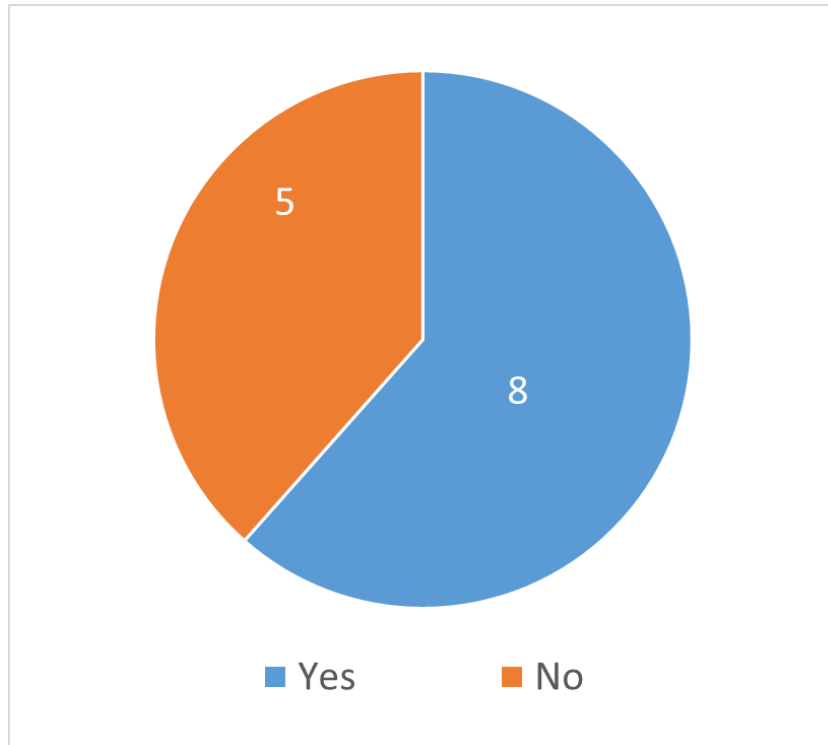
Six Members reported having a emergency process to register vaccine

- 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 are the LSD vaccines currently registered in your country?

Mongolia	LSD-NDOLL
China	Live Attenuated Goat Pox Virus (GTPV) vaccine, Inactivated GTPV vaccine, Inactivated LSDV vaccine.
Việt Nam	Import vaccine: LYMPYVAC; MEVAC LSD; MEVAC LSD KEMIN. Domestic vaccine: NAVET-LPVAC; AVAC LSD LIVE
Thailand	MSD: LumpyVax; Kemin: Mevac
Cambodia	LUMPYVAC and MEVAC LSD
MALAYSIA	LUMPYVAX, BOVIVAX, MEVAC
Malaysia	Ndoll
LAOS	Vaccine provided by China
Indonesia	Mevac, Lumpyvax



# 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

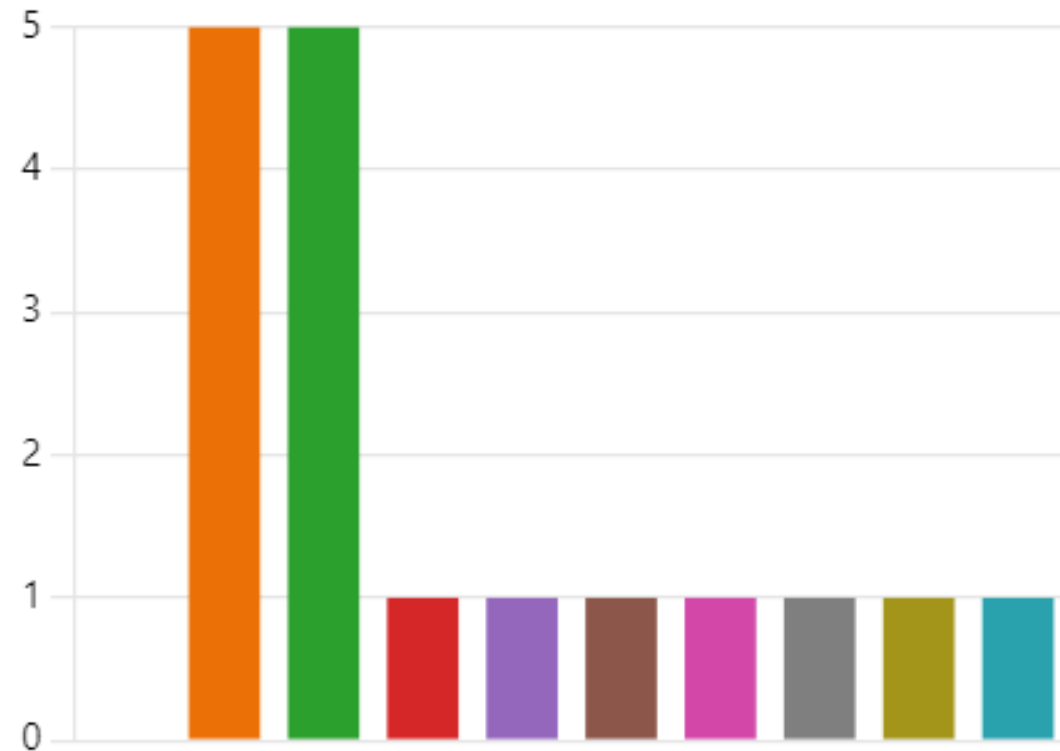




# LSD Vaccine Registration and Procurement




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?

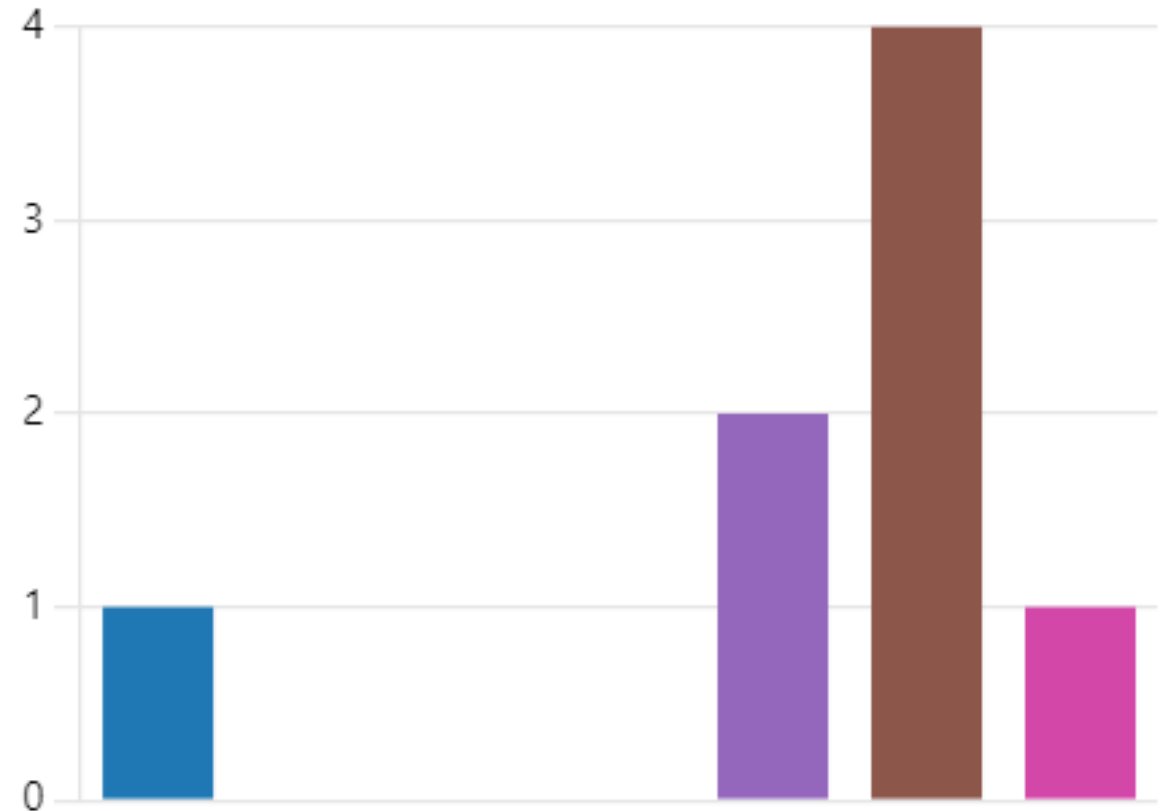
	LumpyShield-G®	1
	Not procured any live attenuate...	5
	Locally produced GTPV vaccine	2



# 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



# LSD Vaccine Registration and Procurement

What are the process involved in ensuring only good quality vaccines are used, especially in emergency settings when the pressure to approve vaccines and bring them in quickly is high?

Government direction

Government tenders and procurement.

According to the manufacturer's recommendations.

From published paper / other country experience

Mostly consider experience from neighboring countries who conducted LSD vaccination, Good Manufacture Practice Certificate, and Free Sale Certificate of producing Countries.

Special permits for 1 year duration

Research and isolation of LSD in country. Know the side effect of vaccine and high risk population targeted

Cold chain assurance and setting up the emergency committee for responding during emergency

In emergency situations by using a special veterinary drug importation mechanism requiring that the vaccine be produced by an established producer and the vaccine must have a certificate of registration, certificate of Good Manufacturing Practices and certificate of free sale from the country of origin.



# LSD Vaccine Registration and Procurement

What are the challenges to procure LSD vaccines during the emergency?

Budget/ Fund - 2

Bidding law

Resources and process of vaccine registration which is under another ministry.

Inexperience on LSD, long duration for the field trail of vaccine, and need to make quick decision on vaccination

Risk unknown, usage unknown, effect unknown

the limit of number of vaccine and limit of human resource and budget LSD preparedness and response

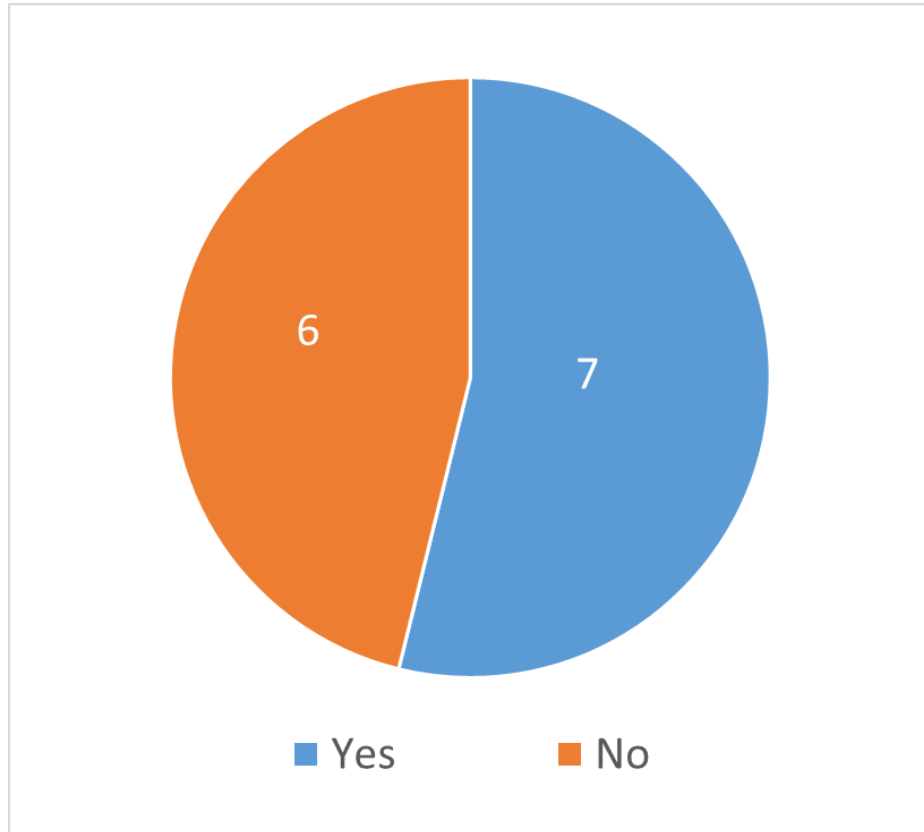
limited budget, vaccines not yet registered, limited number of vaccines, monitoring side effects of veterinary drugs, current field tests



# LSD Vaccination

---

Have you carried out LSD vaccination in your country?



## Reasons for not vaccinating

- ✓ No report of LSD cases, LSD free countries
- ✓ Vaccination not considered as susceptible animal population is small and the impact is assessed as low.
- ✓ We don't see the requirement yet



# LSD Vaccination - Schedule and age of primary vaccination

<b>Members</b>	<b>Vaccination schedule</b>	<b>Age of primary vaccination</b>
Cambodia	May	1 Month
Indonesia	Emergency vaccination	Manufacturer's recommendations
Malaysia	March, September	6 Months
Thailand	December - February	1 Month
Vietnam	Regularly	Manufacturer's recommendations
China	Feb - April, Sep - Nov	6 months
Mongolia	Aug 2021, April 2022, March 2023	3 Months

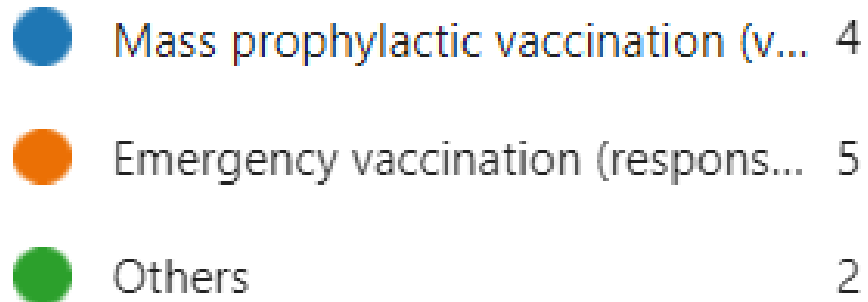


# LSD Vaccination Strategies

---

30. What are the main strategies followed for LSD vaccination?

[More Details](#)





# LSD Vaccination Strategies

---

31. A) If your country conducted mass prophylactic vaccination (vaccination campaigns), what was the strategy followed

[More Details](#)

● Entire country	1
● Buffer zone	1
● Border areas	1
● Targeted/ Risk-based	6



# LSD Vaccination Strategies

Briefly describe how emergency vaccination (response to outbreak) is carried out (e.g. radius, situations in which this is applied)

Usually in affected county and neighboring counties.

Vaccination in outbreak area and localized risk area

Buffer zone

Ring vaccination in village and commune with radius 5 Km and 10 Km respectively.

5-10 KM radius from the infected premises

5 km from kes

Vaccination is carried out in infected zones (in villages where LSD cases are detected) and control zones (villages within a 10 km radius of the infected zone)



# LSD Vaccination Strategies

Please describe other vaccination strategy followed in your country?

vaccination of high value animals and dairy cows – 2

Dairy cattle 100% vaccination and young animals

Commercial farm whole herd vaccinated by owners but for farmers/ small holders conduct ring vaccination/emergency vaccination.

Movement for rearing purpose need to be vaccinated 60 days prior to the movement

Is there any difference in the vaccination policy applied in different parts of the country?

Vaccination of all unvaccinated cattle and cows in northwest and southwest border districts.

Right now, implement the policy of user pay except emergency vaccination carryout by public sector.

Some state have gazetted control of LSD

When planning your vaccination programme, do you consider the schedule of your neighbouring countries? If Yes, please explain?

**Border area in the west - 1**

If enough budget vaccination programme will be plan and may be consider the schedule of neighboring countries.

# LSD Vaccination - Campaign

---

36. Which stakeholders are conducting the vaccination campaign for LSD in your country?

## More Details

 Livestock owner	3
 Veterinary para-professional	6
 Local private veterinarian	7
 Local Government veterinarian	5
 Veterinarian from national and s...	4



# LSD Vaccination - Cost

---

37. Who does cover cost of vaccines and vaccination?

## More Details

● Livestock owner	5
● Local animal health authorities	1
● Provincial/ State animal health a...	1
● National animal health authorities	5
● Others	0



# LSD Vaccination - PPP

---

Can livestock owners and other key stakeholders such as traders see the benefits of vaccination against LSD?

➔ Key stakeholders from all seven Members see the benefits vaccination against LSD

39. If livestock owners and other stakeholders see the benefits of LSD vaccination, are they willing to support costs of vaccine and vaccination?

[More Details](#)

● No	0
● Partially	5
● Fully	2



# LSD Vaccination – Vaccine supply

40. Are there sufficient vaccine supply to meet the vaccine demand in the country for the vaccination program planned for 2023-24?

[More Details](#)



If there is no sufficient vaccine supply to meet the vaccine demand, are sufficient funds allocated from the national budget to cover the needs of production or purchase of vaccine?

Yes - 3 Members
Partially - 1 Member
No - 3 Members



# LSD Vaccination – enhancing vaccination coverage

---

42. Which changes to the current characteristics of available vaccines would help increase the vaccination coverage in your area (price/cold-chain/ accessibility)?

## [More Details](#)

● cost	5
● Vaccine accessibility	3
● Cold chain	3
● Others	1





# LSD Vaccination – Combined

43. Is LSD vaccination campaign currently combined (concurrently conducted) with vaccination campaigns for other TADs?

[More Details](#)

● Yes, LSD and FMD	5
● Yes, LSD and Haemorrhagic Sep...	2
● LSD and other disease	1
● No	2



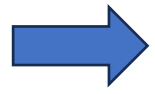
If NO, please provide comments if there are any plans to conduct in the future LSD vaccination concurrently with other TADs vaccination:



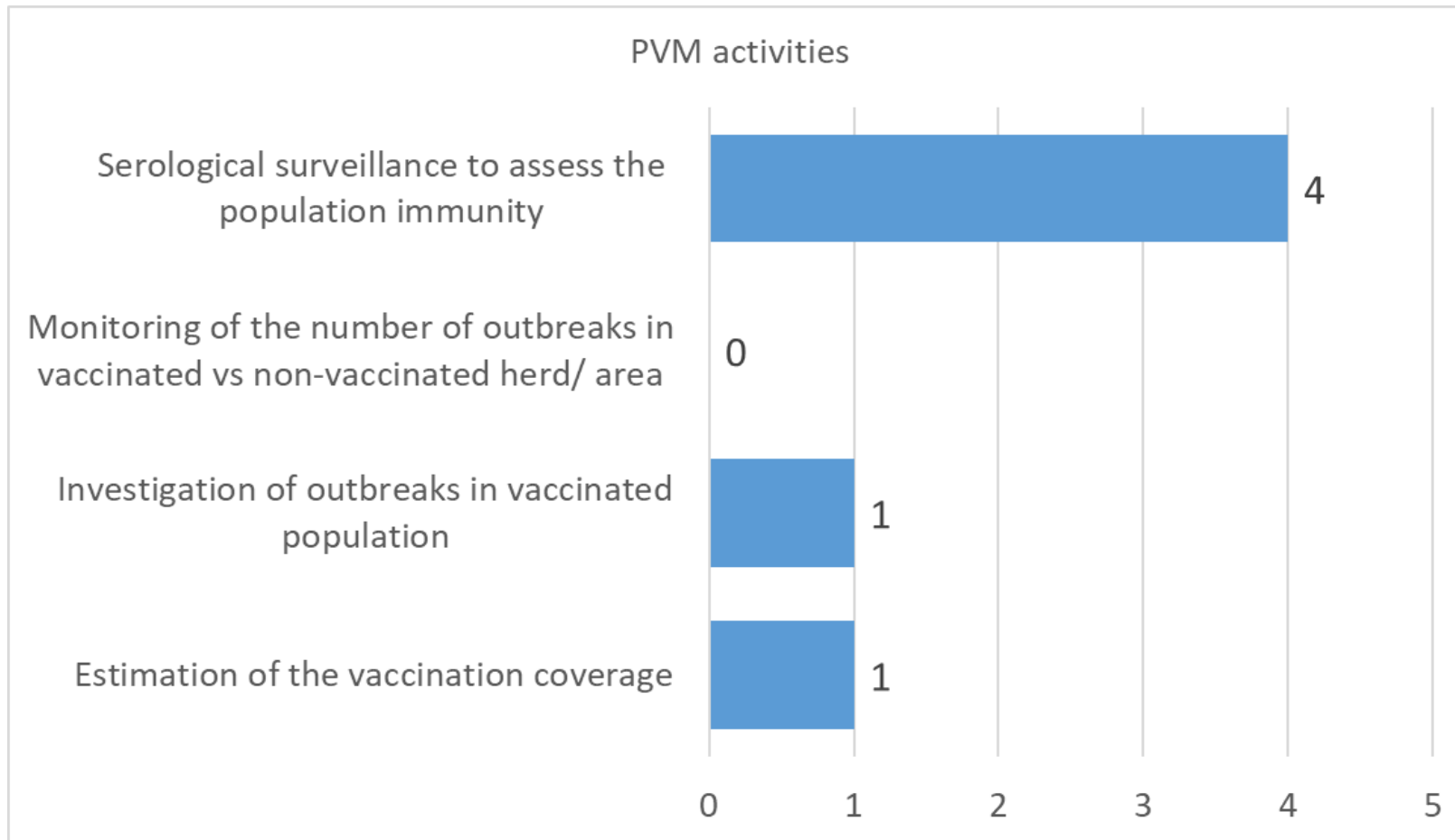
Yes, will do in the future because should save time, money, and human labor.



# LSD Vaccination – Post vaccination monitoring



Six Members reported carrying out PVM activities to determine vaccination program effectiveness

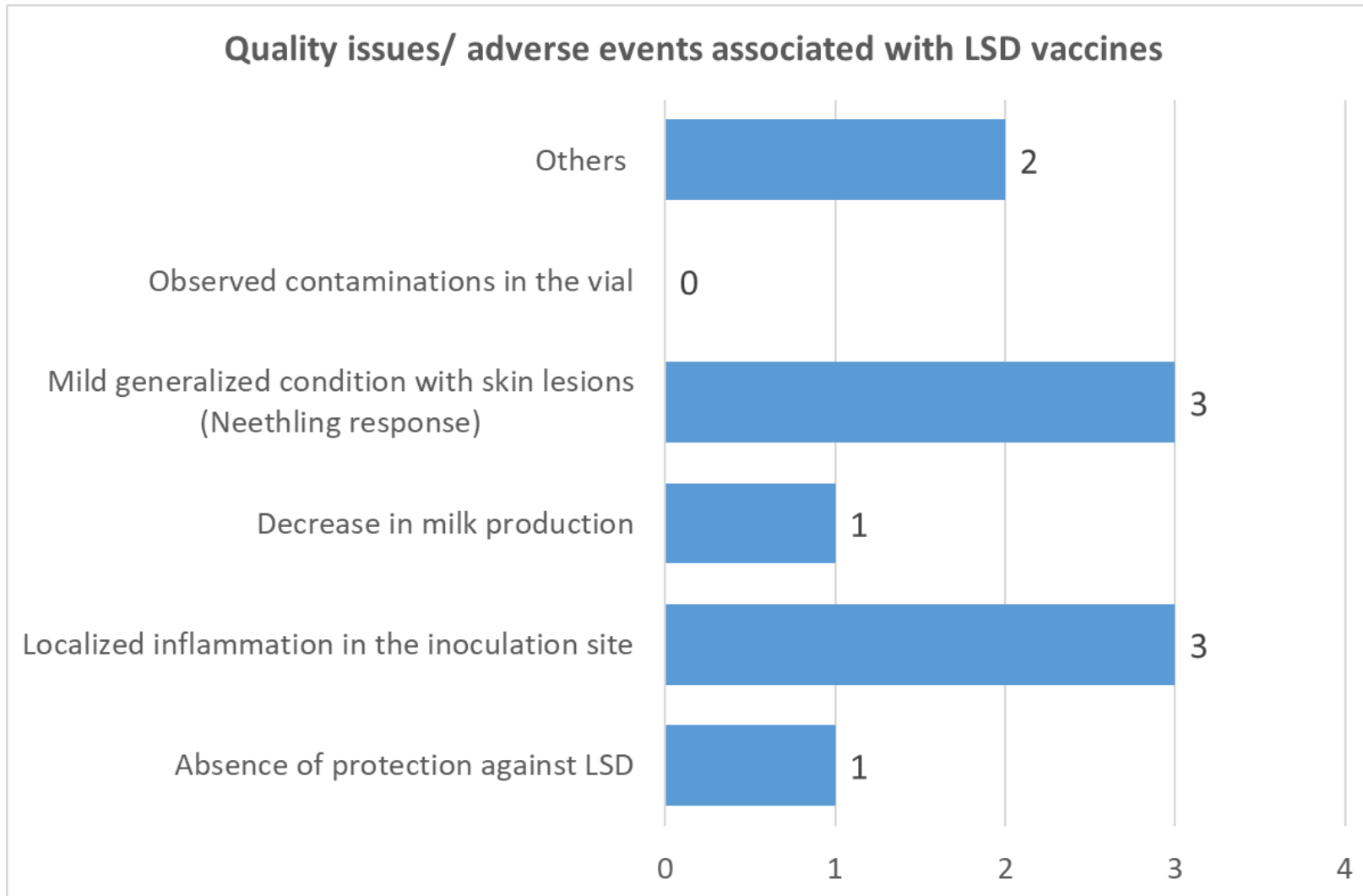


One Member reported LSD outbreak in vaccinated herd



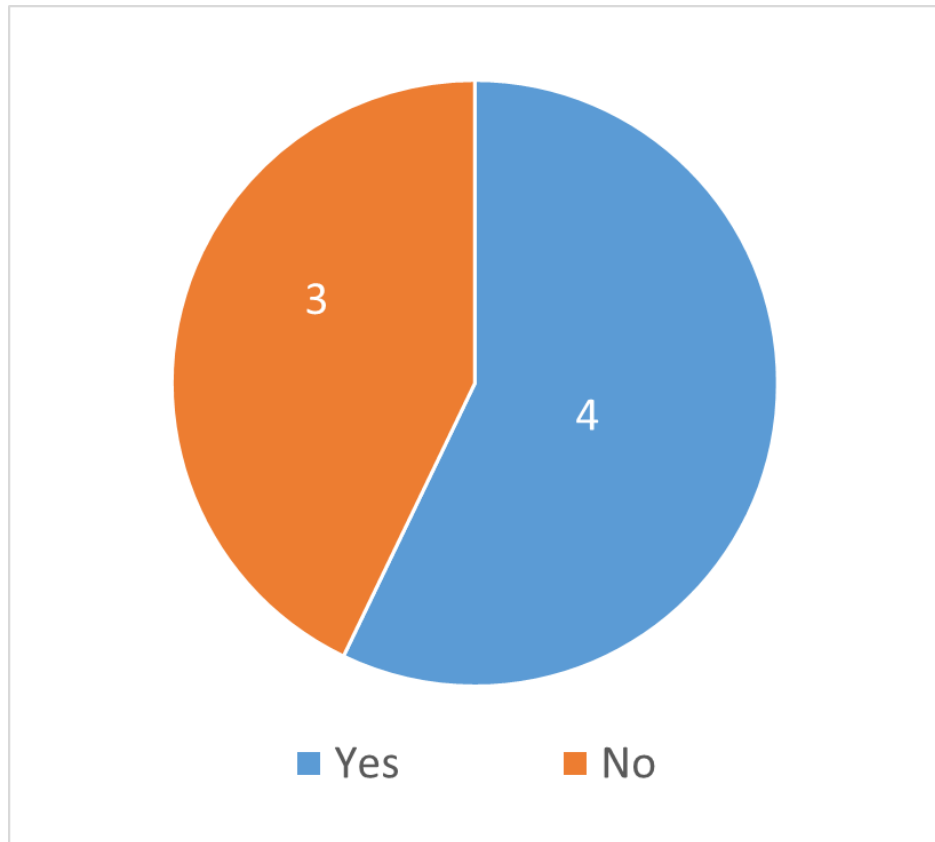
# LSD Vaccination – Quality issues/ adverse events

Have there been any reported quality issues or adverse events associated with LSD vaccines? Do livestock owners complain the side effects of the vaccine?



# LSD Vaccination – enhancing vaccination coverage

Are you satisfied with the existing LSD vaccination coverage/population immunity?



If not satisfied with existing coverage, any measures you would undertake to improve the coverage

Advocacy to get annual budget for LSD vaccine, enforcement of movement certificate for susceptible species and link it with LSD vaccination

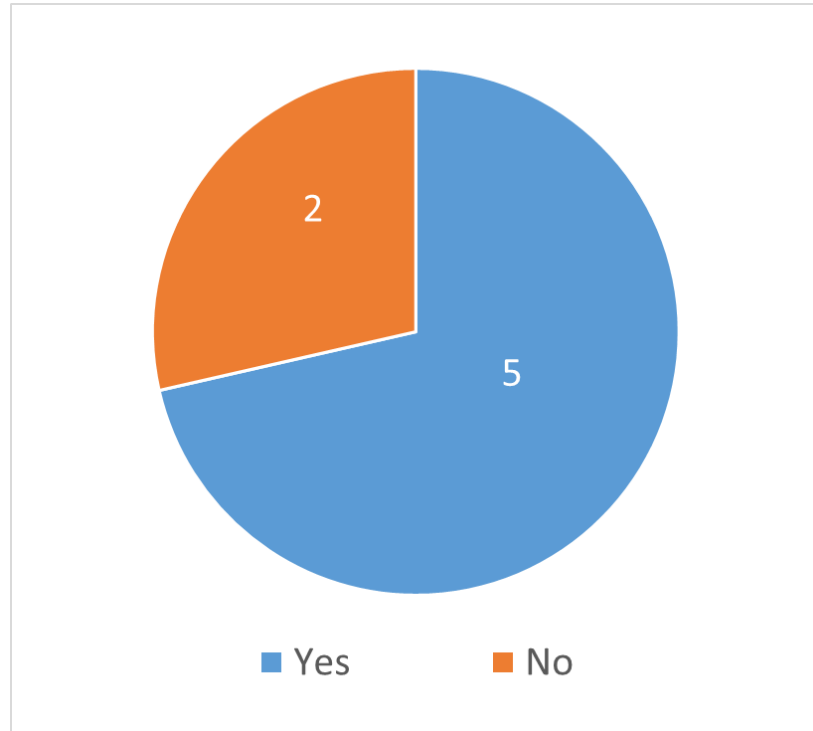
Awareness campaign for farmers

Intensify vaccination by education to gain the willingness of farmer, involving village leaders, vaccination requirement for livestock movement and trade in animal markets

# LSD Vaccination – vaccination program effectiveness

---

Is a method implemented to determine vaccination program effectiveness?



If Yes, what system is implemented to verify vaccination coverage and population immunity?

- ✓ Monitoring vaccination records and outbreak reports
- ✓ Post vaccination monitoring
- ✓ Monitoring of the number of outbreaks in vaccinated herd/ area vs non-vaccinated herd/ area and field survey
- ✓ Reporting
- ✓ Monitoring LSD incidences in vaccinated herds, monitoring vaccination coverage, post vaccination serology monitoring

# LSD Vaccination – Contingency Plan (3 countries)

---

Do your country have an LSD Contingency Plan?

One Member has Contingency Plan

Is LSD emergency vaccination included in the Contingency Plan?

No, but will consider vaccination in case of LSD incursion (3)

Do you stock pile LSD vaccines to be used during the LSD incursion in your country?

Non of the free countries stock pile LSD vaccines

If not stock piled, have you identified the source/ company from where you will get/ procure the LSD vaccines in case of LSD incursion in your country?

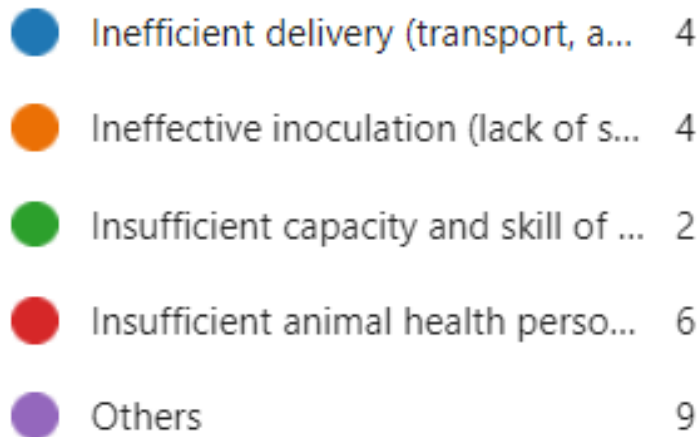
One Free country identified



# LSD Vaccination – Challenges

59. What were the challenges encountered during the implementation of the LSD vaccination programmes?

[More Details](#)



What were the challenges encountered during the implementation of the LSD vaccination programmes?

- ✓ Fund shortage – 4
- ✓ Poor awareness of farmers
- ✓ Limited information on susceptible population
- ✓ No LSD prevention and control

## 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



# Any other suggestions to enhance LSD vaccination in your country and in the region?

---

- ✓ Harmonize LSD control measures for the regions
- ✓ Continuous support from WOAHA on disease information and update on commercially available vaccines, vaccine quality and vaccination programme development
- ✓ Technical assistance (i.e. virtual training modules, resource person for LSD fora, etc.);
- ✓ IEC materials for adoption and dissemination
- ✓ Sharing of vaccines between countries if possible
- ✓ Provide other options for vaccination procurement.
- ✓ Enhance movement control
- ✓ Support access to quality LSD vaccines



# Conclusion

---

- This survey provides useful information on:
  - Status/ benchmark of LSD vaccine access and vaccination implemented by the Members
  - Main challenges faced by the Members
  - Expected support from WOAAH and Partners
- Provide some recommendations to enhance LSD prevention and control in South-East Asia
- Way forward
  - Seek additional information from some Members
  - Detail analysis will be done and report prepared along with key recommendations
  - Findings will be used to enhance ASEAN LSD Prevention and Control Strategy as well as to provide targeted support to the Members by WOAAH and other Partners





# THANK YOU

---



4<sup>th</sup> LSD Coordination Meeting  
28 – 29 November 2023, Bangkok, Thailand