



LESSONS LEARNED FROM ASEAN REGIONAL STRENGTHENING OF FMD CONTROL IN SOUTHEAST ASIA PROJECT

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25th SEACFMD National Coordinator's Meeting

Tuesday, 4 October 2022

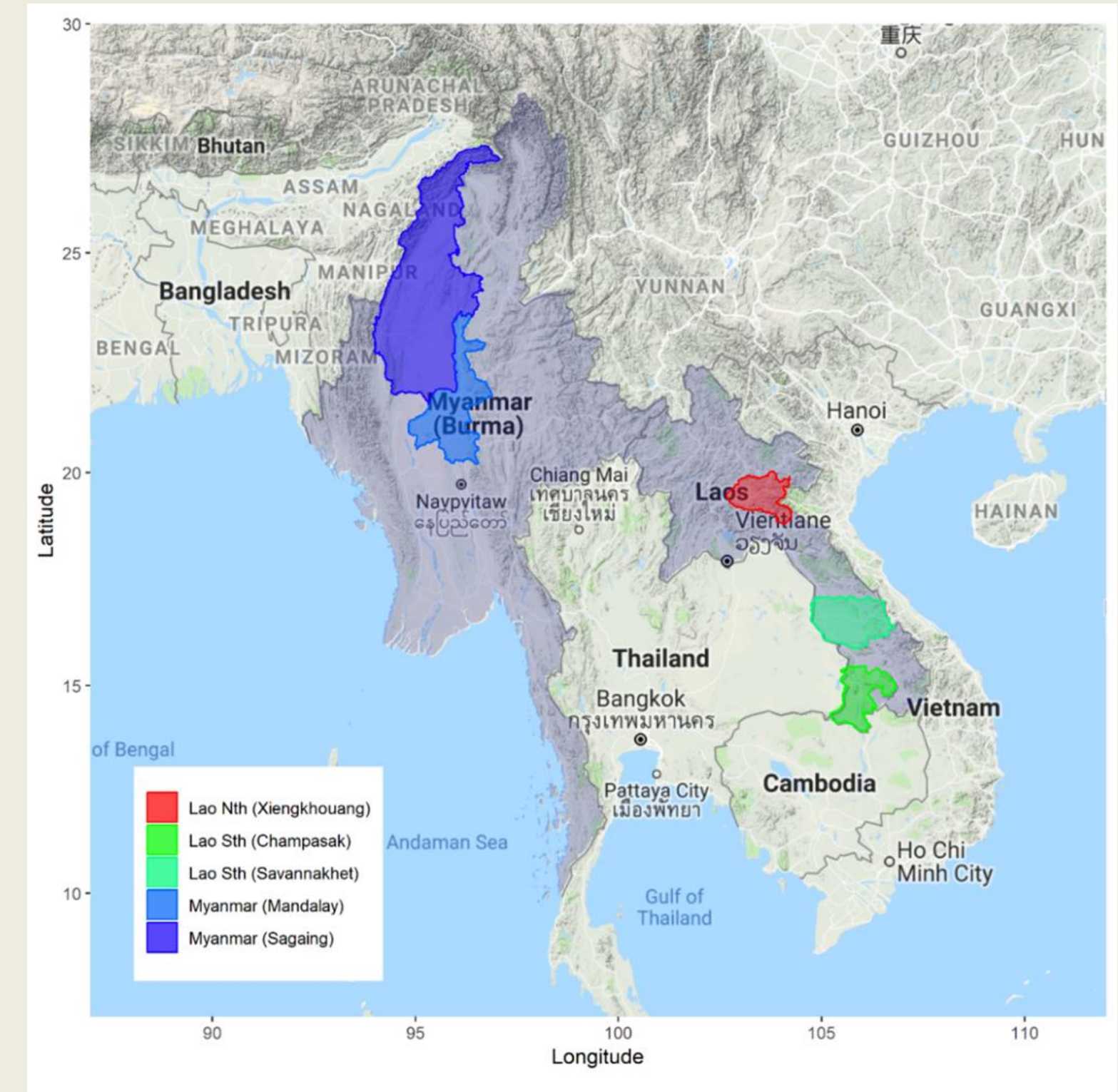


Background

ASEAN Regional Strengthening FMD Control in South-East Asia Project

Project period:
Sep 2015 – May 2022

Funded by :
Ministry of Foreign Affairs and Trade (MFAT) Government of New Zealand





Goal and outcomes

Goal

Reduction in the occurrence of FMD infection in the Mekong region, ultimately leading to increased livestock-related income for rural households and improved food security.

Short term outcome

1. Risk-based FMD control strategies in place for the target villages.
2. Risk-based FMD control actions operational.
3. Improved capabilities of key stakeholders across value chain and national VS in FMD disease control.
4. Increased awareness of control practices.
5. Tools for assessment of disease status and control impact

Medium term outcome

1. Reduced clinical incidence and serological prevalence of FMD in target villages relative to non-target villages.
2. Increased herd and animal immunity to FMD..
3. Enhanced regional commitment / engagement to contribute to FMD eradication.

Long term outcome

1. Increased number of zones that are currently free.
2. Increased contribution of livestock production to household income.



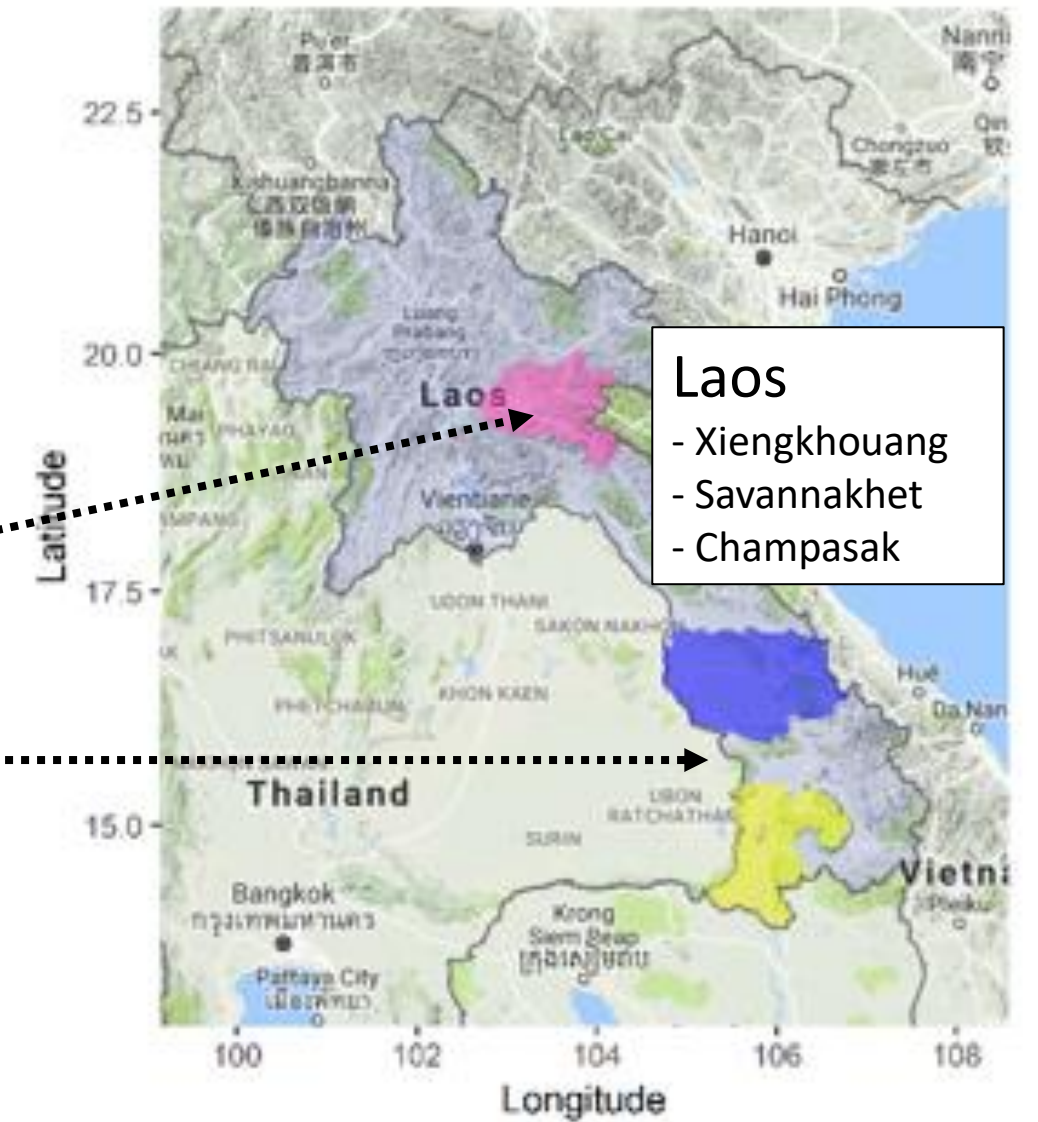
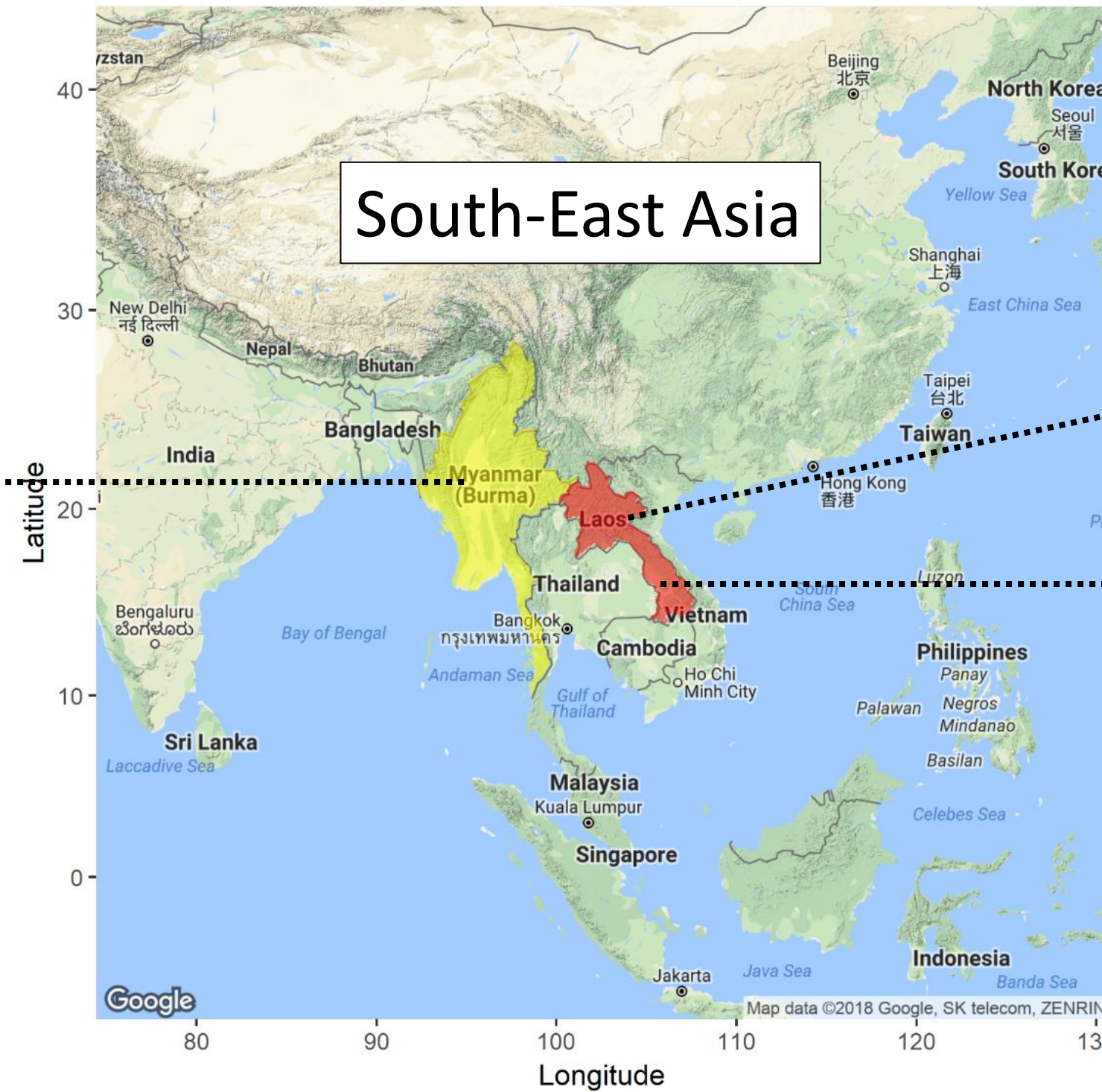
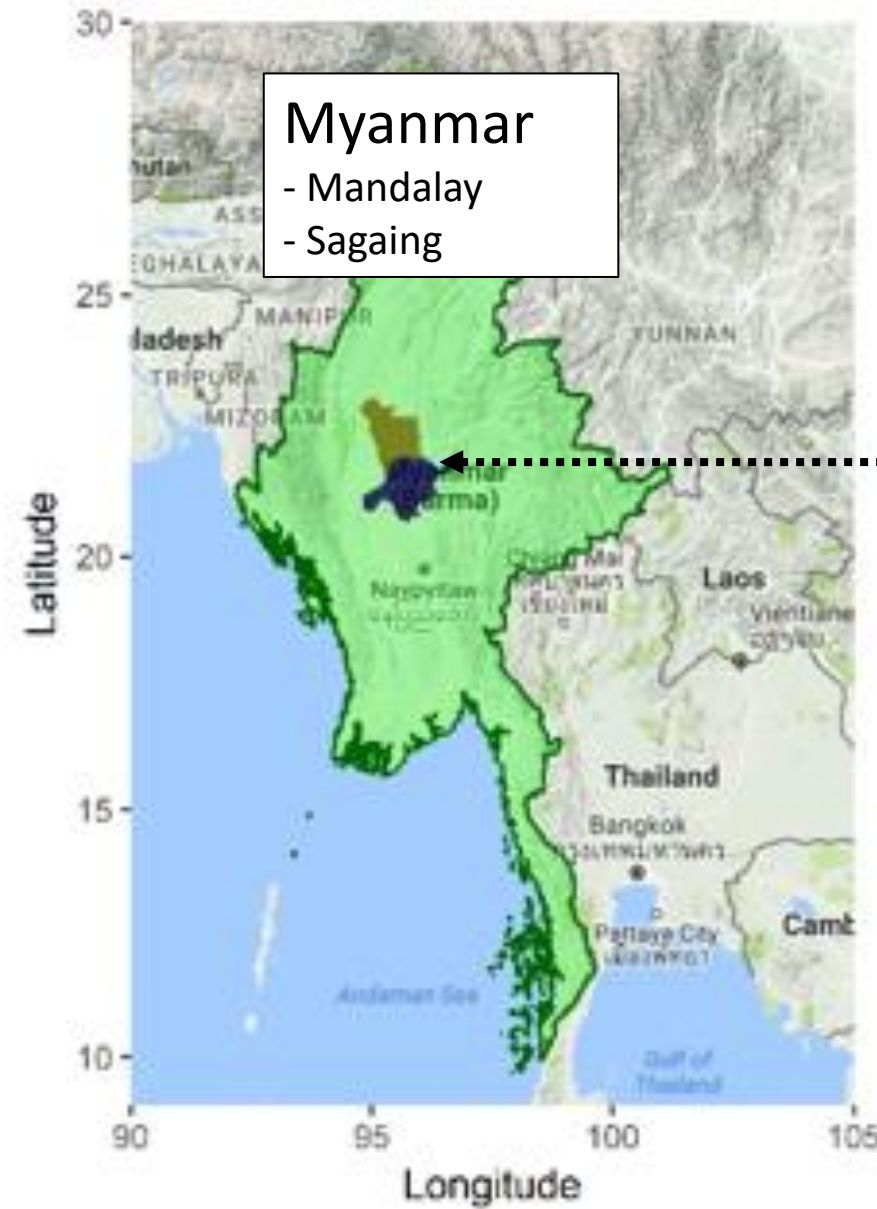
Project Outputs

- Output 1: FMD risk assessments conducted in target areas.
- Output 2: Control strategies developed and implemented for target areas.
- Output 3: Training and technical assistance provided.
- Output 4: Coordination workshops conducted, and resource materials provided.
- Output 5: FMD monitoring, evaluation, and modelling tools established.





Project target area





Short - term outcomes



Short term outcome

1. Risk Based FMD Control Strategies in place

5

Provinces /Region

47

Townships /Districts
Target 42

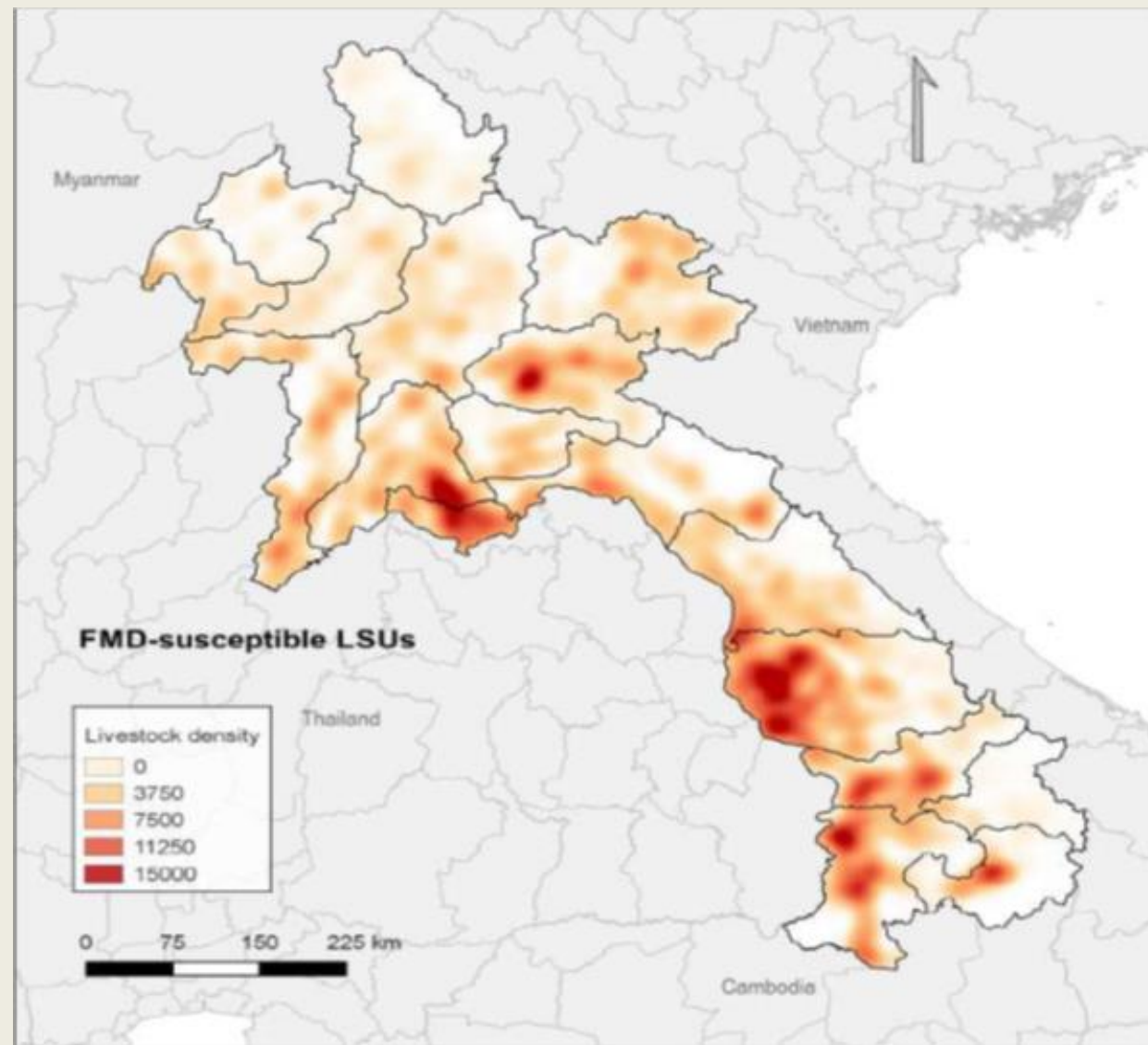
2212

Target villages reached pre-pandemic
target 960

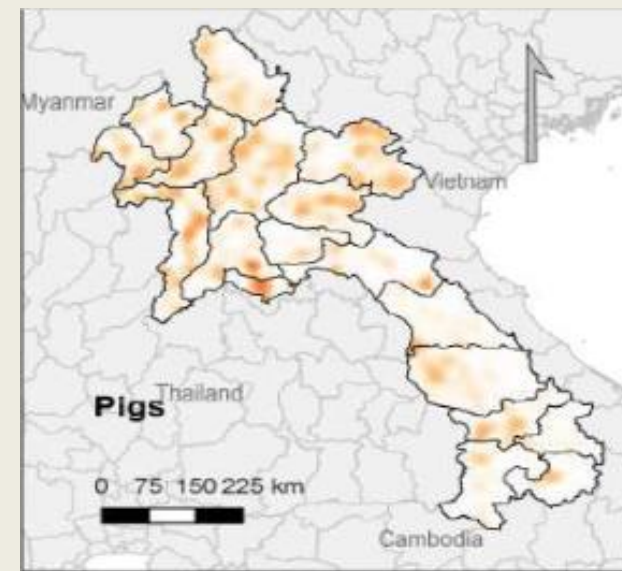


Short term outcome

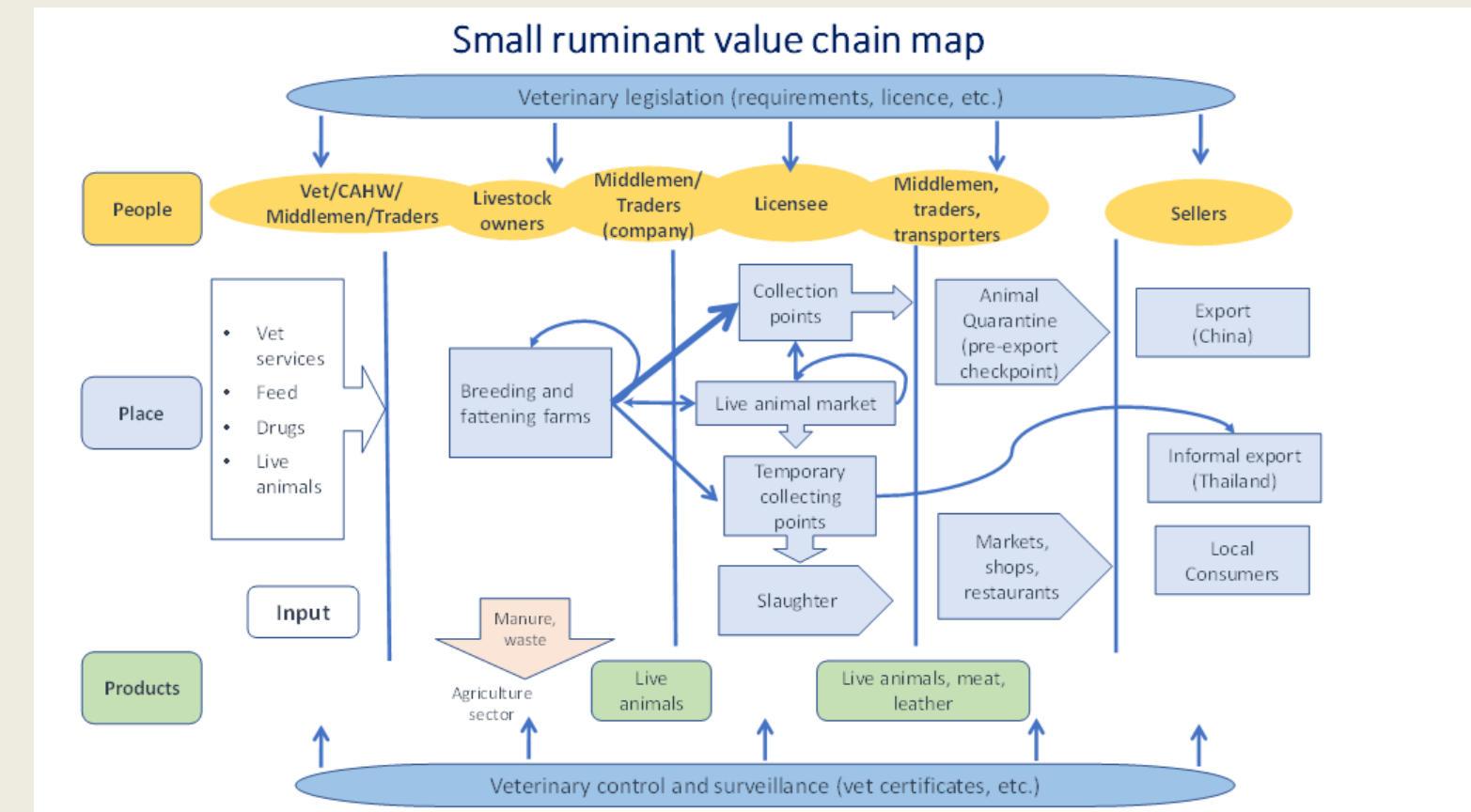
2. Risk Based FMD Control Strategies operational



Lao PDR risk maps



Pig density maps



Myanmar value chain



Short term outcome

2. Risk Based FMD Control Strategies operational

84 %

In Lao PDR target villages and household practice vaccination in 2020 compared to 67 % villages and 46 % households in 2016

82%

In Myanmar, target villages were vaccinated



Short term outcome

2. Risk Based FMD Control Strategies operational

3,801,475

Number of FMD vaccine doses delivered

(Lao PDR 993,750 and Myanmar 2,807,725)

Doses delivered :

3,547,656

Number of FMD vaccines administered

(Lao PDR 982,426 and Myanmar 2,565,230)



Short term outcome

2. Risk Based FMD Control Strategies operational





Short term outcome

3. Increased awareness of control strategies

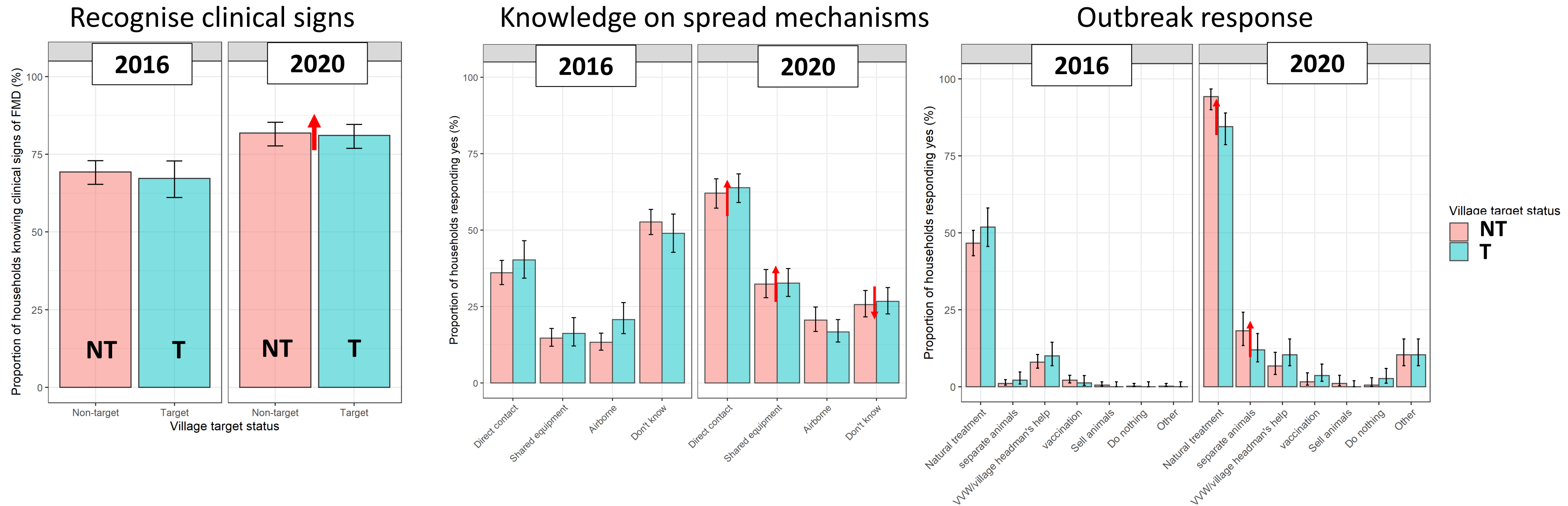
82%
capacity to detect
clinical signs in 2020
69% in 2016
(13 % increase)

29
Resource materials
target 5



FMD knowledge/awareness

Generally improved in 2020 compared with 2016





Short term outcome

3. Improved awareness of the control strategies



ဒီဝလုံခြုံမှုဆိုင်ရာ လိုက်နာရမည့်အခြေခံအဆင့်များ

1 ဆေးကုသရန်လိုအပ်သည့် ခွေး၊ ငှက်၊ ခွေးမွေးကောင်များကို ဝေးကွာစေရန်	2 ဆေးကုသရန်လိုအပ်သည့် ခွေး၊ ငှက်၊ ခွေးမွေးကောင်များကို ဝေးကွာစေရန်	3 ဆေးကုသရန်လိုအပ်သည့် ခွေး၊ ငှက်၊ ခွေးမွေးကောင်များကို ဝေးကွာစေရန်
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FMD FREE MYANMAR

Supported by: EPI-INTERACTION, NEW ZEALAND FOREIGN AFFAIRS & TRADE AID PROGRAMME





Project publications

ORIGINAL ARTICLE Transboundary and Emerging Diseases **WILEY**

Impact of risk-based partial vaccination on clinical incidence and seroprevalence of foot and mouth disease in Lao PDR

Jun-Hee Han¹ | Supatsak Subharat¹ | Masako Wada¹ | Daan Vink² | Bernard J. Phiri³ | Ashish Sutar⁴ | Ronello Abila⁴ | Syseng Khounsy⁵ | Cord Heuer¹

ORIGINAL ARTICLE Transboundary and Emerging Diseases **WILEY**

Socioeconomic impacts of clinical foot-and-mouth disease and a risk-based partial vaccination campaign for smallholders in Lao People's Democratic Republic

Masako Wada¹ | Supatsak Subharat¹ | Ashish Sutar² | Ronello Abila² | Syseng Khounsy³ | Cord Heuer¹

ORIGINAL ARTICLE Transboundary and Emerging Diseases **WILEY**

Livestock movement patterns in the main livestock production provinces of Lao PDR

S. Subharat¹ | M. Wada¹ | A. Sutar² | R. Abila² | S. Khounsy³ | C. Heuer¹

frontiers in Veterinary Science BRIEF RESEARCH REPORT
published: 23 July 2021
doi: 10.3389/fvets.2021.691308

Detection of Foot-and-Mouth Disease Virus in the Absence of Clinical Disease in Cattle and Buffalo in South East Asia

Kelly Buckle^{1*}, Rudolfo Bueno¹, Andrew McFadden¹, Mary van Andel², Richard Spence¹, Carolyn Hamill¹, Wendi Roe³, Emilie Vallee³, Fernanda Castillo-Alcala³, Ronel Abila⁴, Blesilda Verin⁴, Bolortuya Purevsuren⁴, Ashish Sutar⁴, Htun Htun Win⁵, Myo Thiha⁵, Khin Ohnmar Lwin⁵, Syseng Khounsy⁶, Sengxay Phonthasy⁶, Vilideth Souriya⁶, Chattouphone Keokhamphet⁶, Jonathan Arzt⁷, Anna Ludi⁸ and Valérie Mioulet⁸

ORIGINAL ARTICLE Transboundary and Emerging Diseases **WILEY**

Evaluating the utility of national-scale data to estimate the local risk of foot-and-mouth disease in endemic regions

Mary van Andel¹ | Scott Zaari² | Phiri Bernard¹ | Andrew McFadden¹ | Ian Dacre² | Paul Bingham¹ | Cord Heuer³ | Barbara Binney¹ | Kelly Buckle¹ | Ronel Abila² | Htun Htun Win⁴ | Khin Ohnmar Lwin⁴ | M. Carolyn Gates³

ORIGINAL ARTICLE Transboundary and Emerging Diseases **WILEY**

Estimating foot-and-mouth disease (FMD) prevalence in central Myanmar: Comparison of village headman and farmer disease reports with serological findings

Mary van Andel¹ | Geoff Jones² | Kelly Buckle¹ | Ben Phiri¹ | Andrew McFadden¹ | Ian Dacre³ | Paul Bingham¹ | Cord Heuer⁴ | Ronel Abila³ | Htun Htun Win⁵ | Khin Ohnmar Lwin⁵ | Barbara Binney¹ | Scott Zaari³ | M. Carolyn Gates⁴



Short term outcome

4. Improved capabilities of key stakeholders across value chain and national Veterinary Services in FMD disease control

27,000

Farmers

Target 1350

2,029

Community
Animal Health
Workers

Target 1350

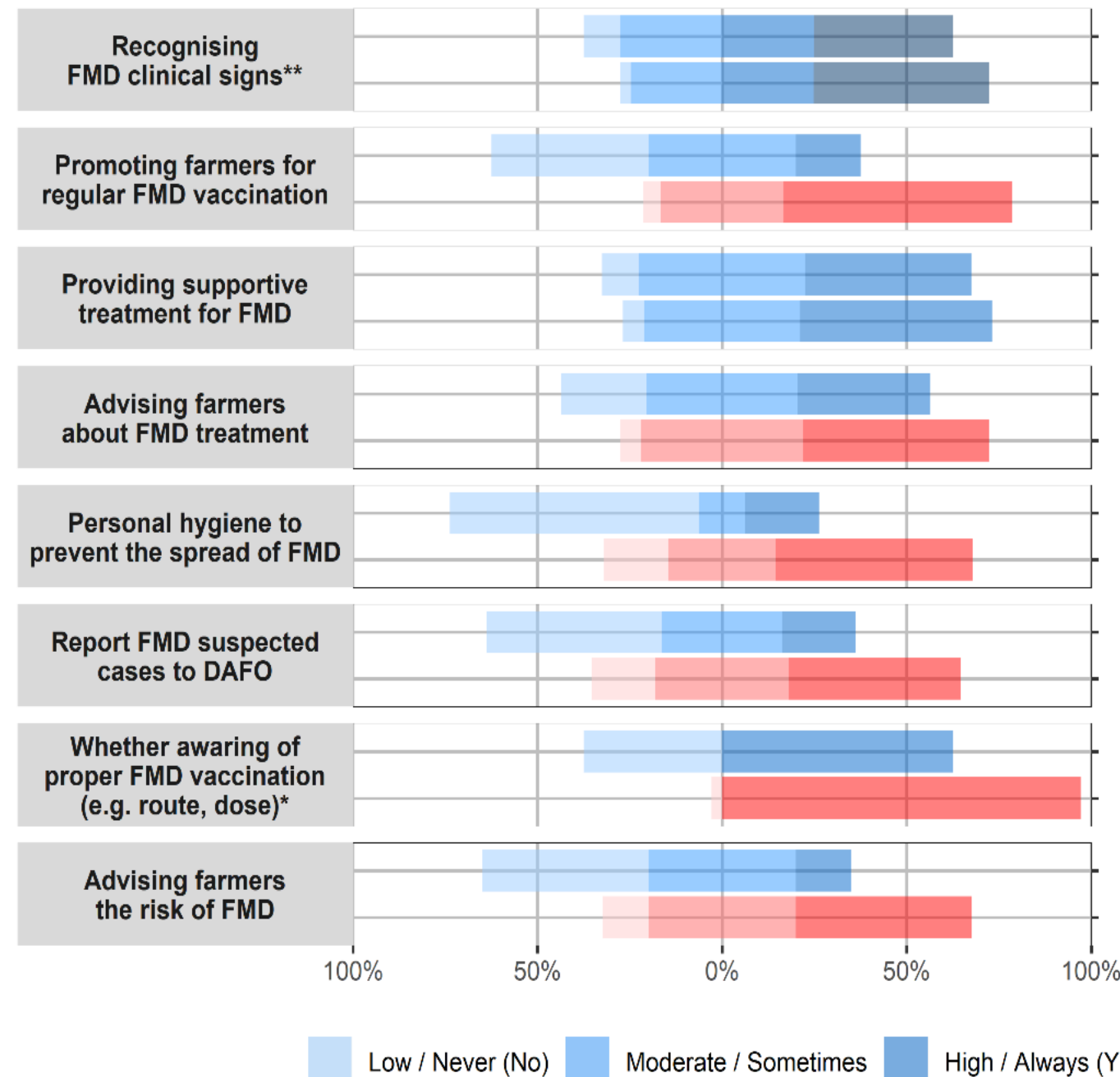




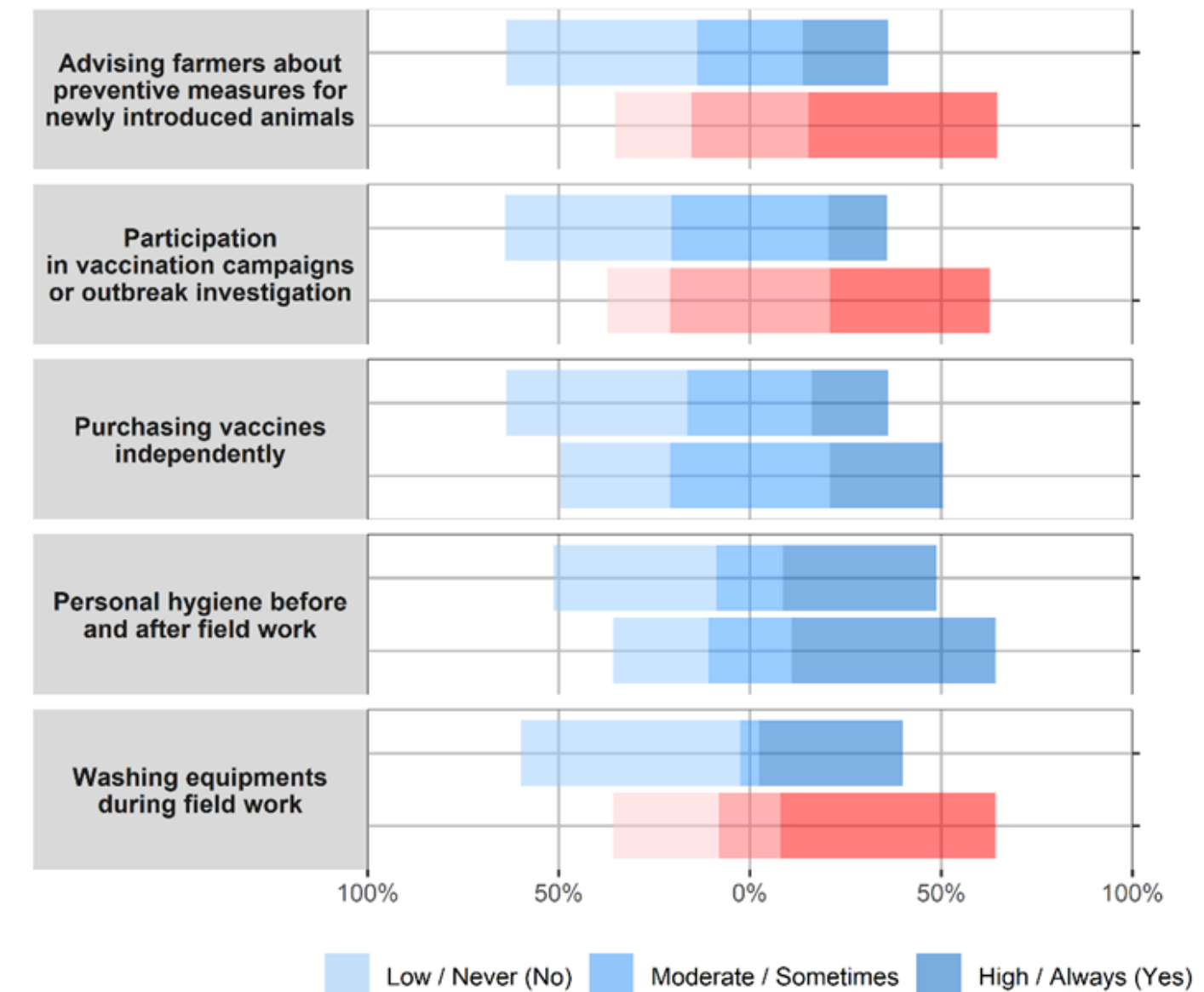
Impact of training (VFW survey 2020, Lao PDR)

upper bar: not-trained
lower bar: trained
RED: significant difference

FMD focused



Biosecurity

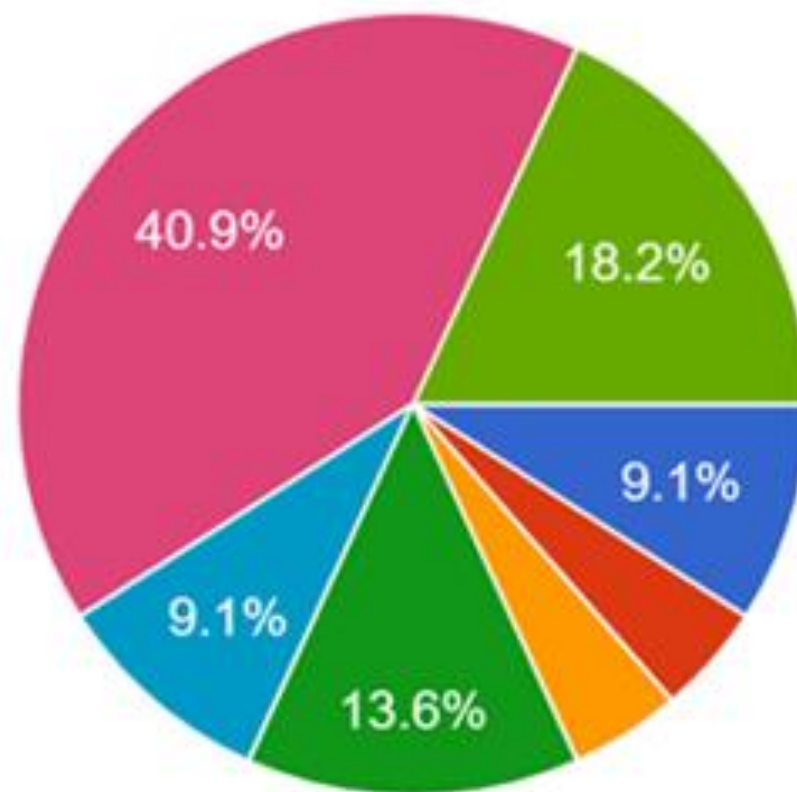


Low / Never (No) Moderate / Sometimes High / Always (Yes)



Impact of training (Laboratory staff, Myanmar)

How did you apply new knowledge or skill in your routine work?
22 responses



- Create excel spreadsheet for my data
- Multiple spreadsheets for my data
- Use functions and formula
- Use graphs and tables
- Pivot table analysis
- able to use LBVD routine disease reporting
- Send my LBVD report my email using...
- other reporting purpose
- specific disease study purpose

Excel spreadsheet showing data for 'National Food and Agriculture System Project Ingaipu Top's Population of Potentially (2020-2025)'. The spreadsheet includes columns for 'Ingaipu Top', 'Population of Potentially (2020-2025)', 'LBVD staff', and 'CAIW'. The data is organized into rows for different locations and years.



Emergency response procedures

Outbreak investigation trainings(2018, 2021) application of training content

- Sagaing, Mandalay, Lay Ywar, Lein Taw, Ywae Pule outbreak investigation in Myanmar
- Attapeu, Xayabuly and Laung Prabang outbreak investigation and responses.
- Coordination with MPI, ACDP, RRL and WRL for validating diagnosis and genotyping of FMDV





Epidemiology training in NZ (2017-19)

4-week course of basic epidemiology and data management training

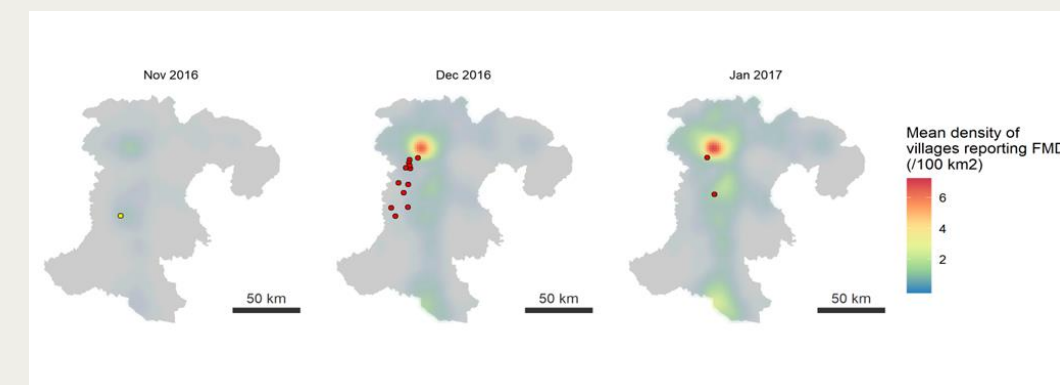
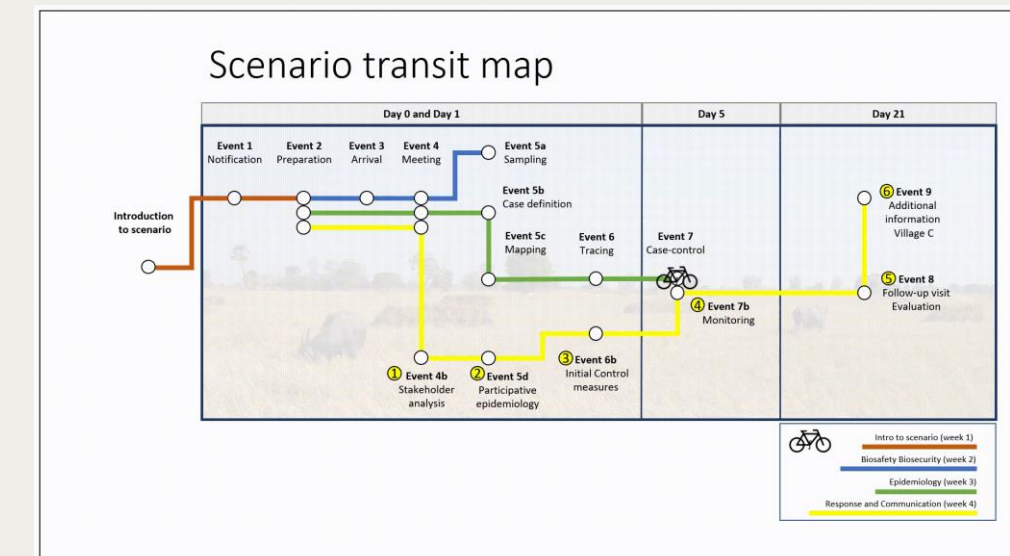
- Participants from Lao PDR, Myanmar, Cambodia and Vietnam
- 2.5 weeks, Lecture/exercise
- 1.5 weeks, Project work including IRIS projects
- Final evaluation and site visit at MPI AHL Wallaceville





Capacity building programs

- [Training of Trainers \(ToT\) on outbreak investigation](#) (31 May – 8 July 2021); 21 participants from 9 countries
 - *E-modules for Outbreak investigation for 3 levels (VPP, field vet and Central vet) for WOAHA portal (Pilot in 2023)
- [Advanced GIS training](#) (27 July - 30 Aug 2021); 31 participants from 10 countries. , and Advanced GIS training follow-up (3 -12 May 2022)
- [Epidemiology study design training](#) , (11 Nov –10 Dec 2021); 34 participants from 11 countries
- [Infectious disease modelling training](#) (21 Feb –31 March); 40 participants from 12 countries are attending the course.





Short term outcome

29

Regional workshop and trainings

Target 10

36

National workshops and trainings

Target 20

25

Sub-national workshop and trainings

Target 20

Short term outcome

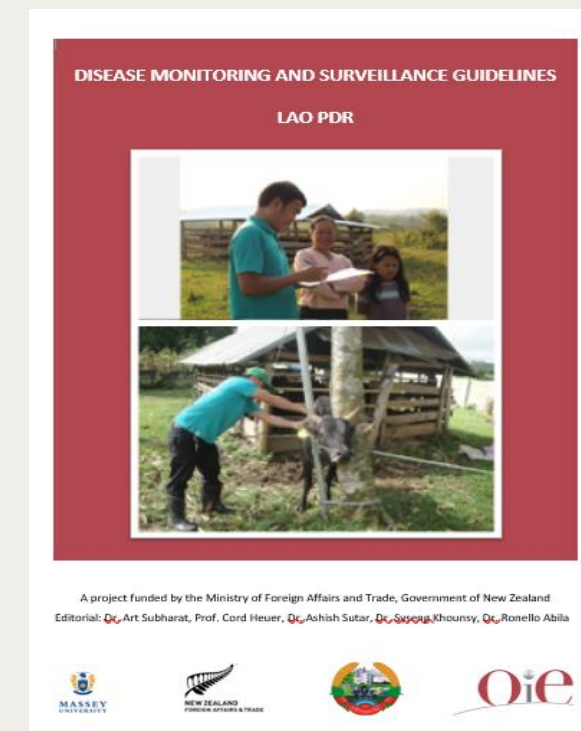
5. Tools for the assessment of the disease status and control impact

2

Improved national surveillance system target :2

Tools

- National Disease Monitoring and Surveillance Guidelines.
- Integrated Realtime Information System (IRIS)
- Post Vaccination Monitoring Guidelines (PVM)





Medium - term outcomes



Medium term outcome

1. Reduced clinical incidence and serological prevalence of FMD in target villages relative to non-target villages

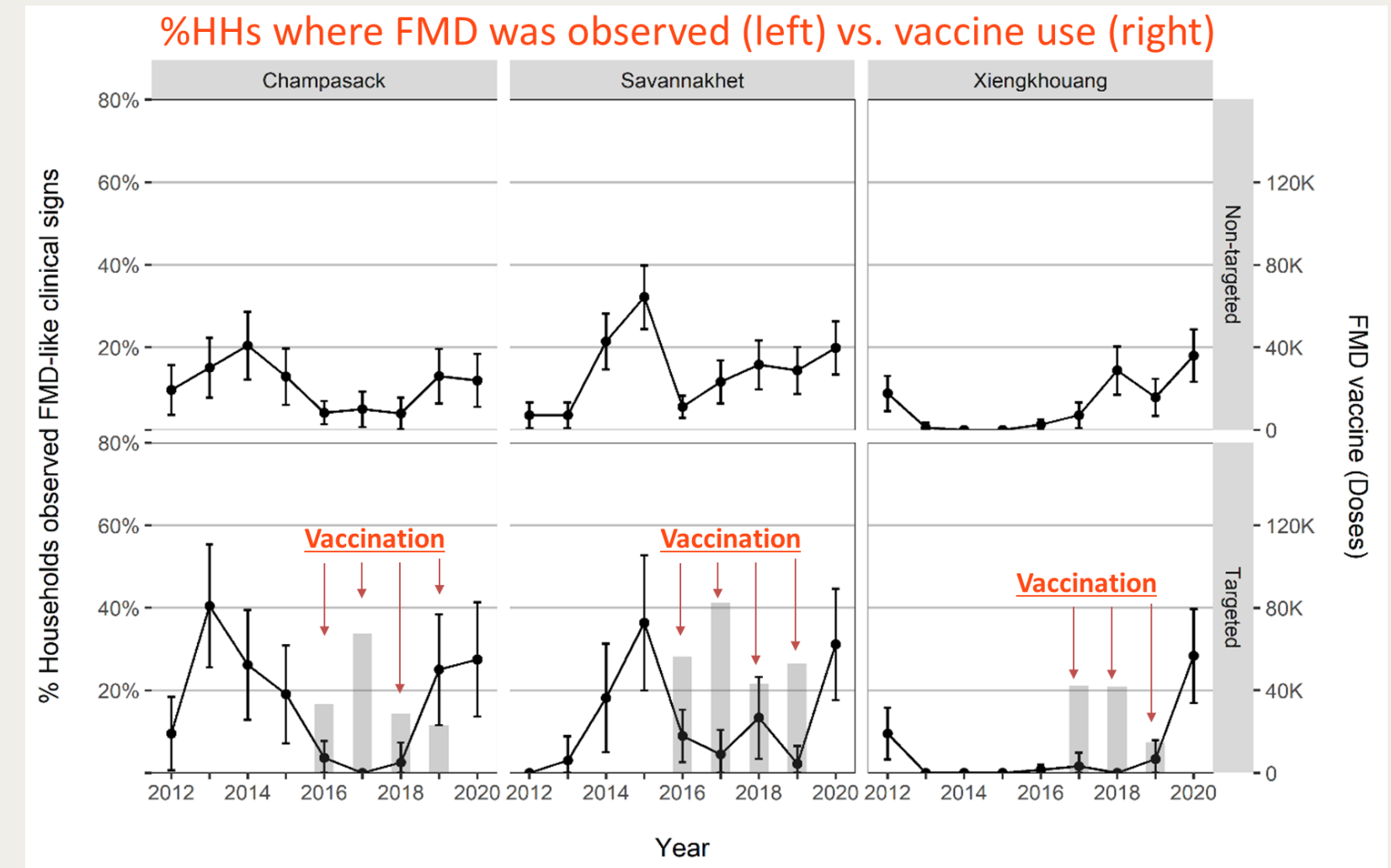
- Vaccination reduced clinical FMD
- Clinical FMD increased when vaccination stopped

ORIGINAL ARTICLE

Transboundary and Emerging Diseases WILEY

Impact of risk-based partial vaccination on clinical incidence and seroprevalence of foot and mouth disease in Lao PDR

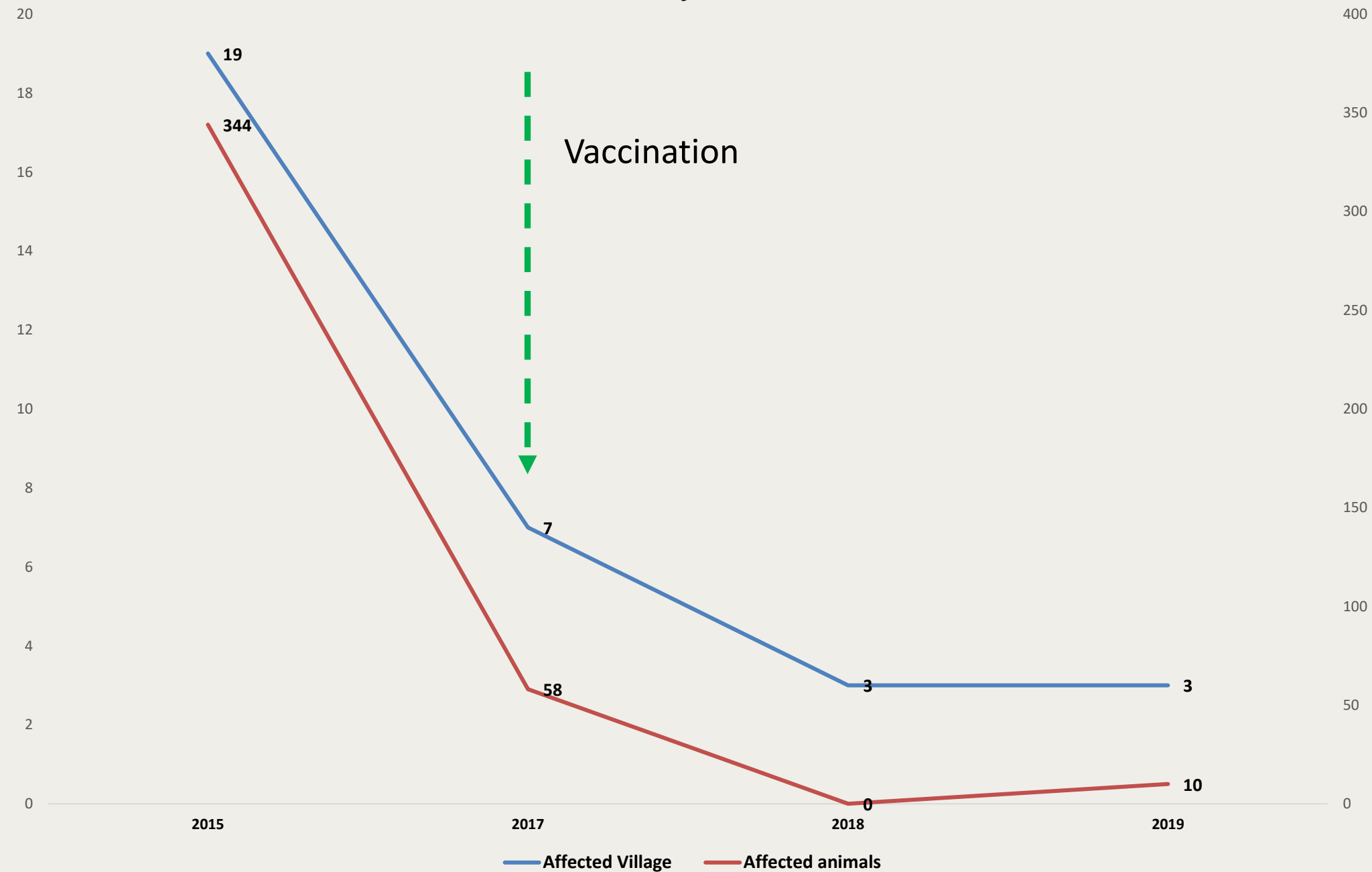
Jun-Hee Han¹ | Supatsak Subharat¹ | Masako Wada¹ | Daan Vink² | Bernard J. Phiri³ | Ashish Sutar⁴ | Ronello Abila⁴ | Syseng Khounsy⁵ | Cord Heuer¹





Reduction of the clinical disease in Myanmar

FMD incidence Project area



98% not
seen FMD

CAHW survey validation in
2018 : reduction of clinical
incidence in Myanmar



Medium term outcome

2. Increased herd and animal immunity (more details in following presentation)

62%

animal immunity in target
villages in Lao PDR
(O= 68%, A= 70%, Asia-1 = 48%)

Post Vaccination Monitoring (PVM) 2020

72%

animal immunity in target
villages in Myanmar
(O= 65%, A = 70%, Asia-1 = 81%)

Post Vaccination Monitoring (PVM) 2018



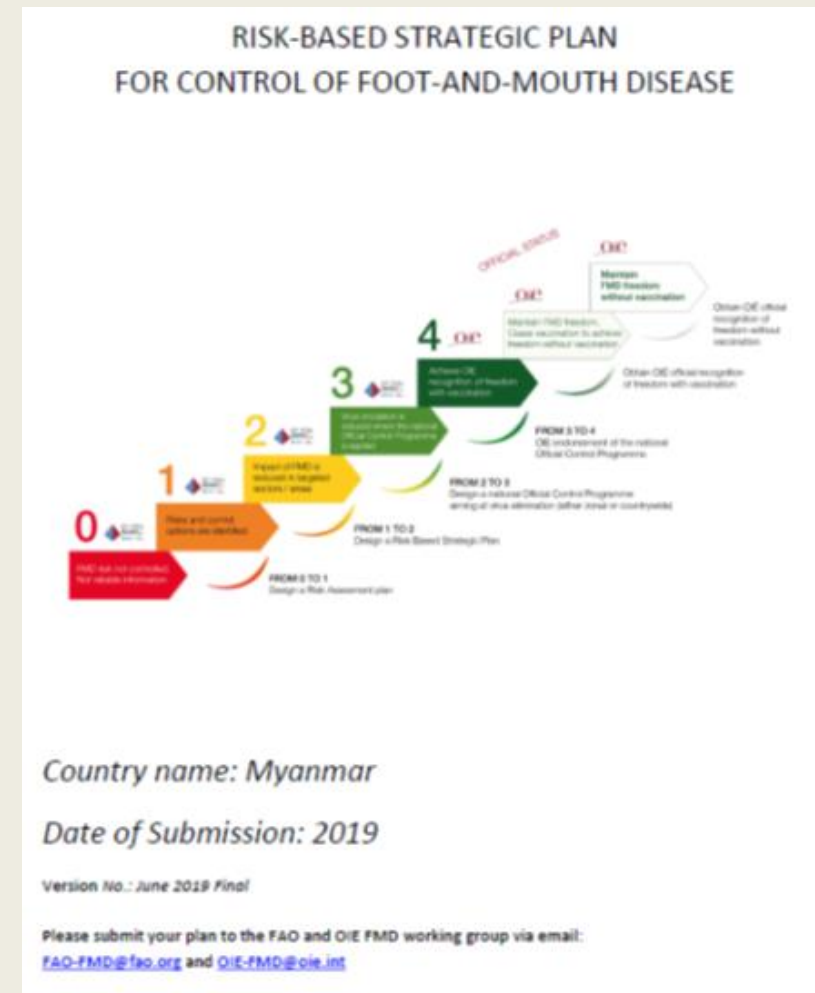


Medium term outcome

3. Enhanced regional commitment / engagement to contribute to FMD eradication

PCP2

Lao PDR and Myanmar moved from PCP – 1 to PCP 2



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ກົມລ້ຽງສັດ ແລະ ການປະມົງ
ບັນເທົາທາ, ເມືອງສີໂຄດຕະບອງ, ນະຄອນຫລວງວຽງຈັນ
ເລກທີໂປສະນີ: 0644
ເບີໂທ: +856-21 215242
Email: dflaos@hotmail.com

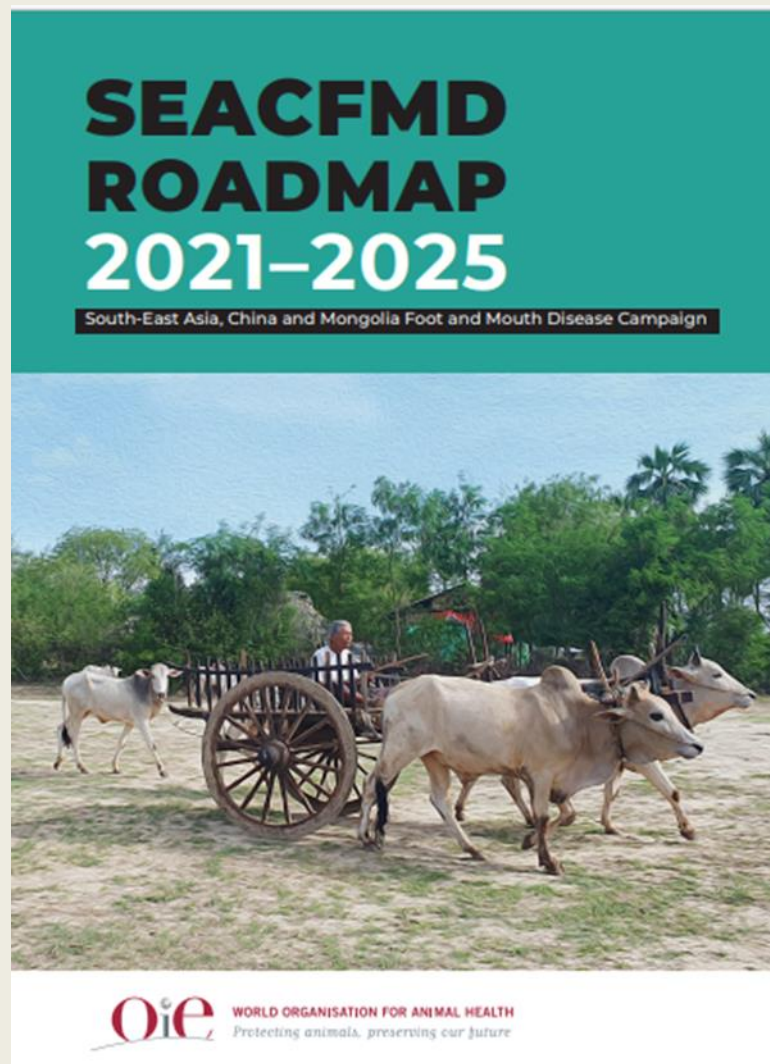
ປັນວາ 2019

Logos for eufmd, FAO, and OIE are present at the bottom.



Medium term outcome

3. Enhanced regional commitment / engagement to contribute to FMD eradication



- SEACFMD Roadmap 2021-2025 is endorsed by the SEACFMD Sub-commission in 2020.
- Implementation of M&E framework
- SEACFMD Sub-commission Meetings: (2015-16-17-18-20-22)
- SEACFMD National Coordinator Meetings (Annual)
- SEACFMD EpiNet/LabNet Meetings (2017-18-19-21)
- UMWG working Group (2015-17-19)

<https://rr-asia.woah.org/en/projects/foot-and-mouth-disease-fmd/seacfmd-campaign/>



Medium term outcome

3. Enhanced regional commitment / engagement to contribute to FMD eradication



26 SEACFMD Sub-commission meeting (Mar 2022)



22 SEACFMD LabNet Meeting (Nov 2019)



22 SEACFMD National Coordinator Meeting (June 2019)



Long - term outcomes



Long term outcome

1. Increased number of zones that are currently FMD-free

Laungnamtha,
Lao PDR



Kutkai Township,
Shan State



Long term outcome

2. Increased contribution of livestock production to household income

5.8 %

USD 218 higher net gains
in target villages/hh/year
in 2020

Target : 20 %



PROJECT END EVALUATION



Objective and methodology

- Final Evaluation to undertake the assessment of the Project from its design to its implementation.
- Methodology
 - Secondary data collection [Project Reports, Project design document, target country reports, Regional workshops and meeting reports, SEACFMD roadmaps, and Global FMD control strategy etc.].
 - Primary data collection [Focus Group Discussions (FGD's), Semi-Structure Interview (SSI); and Questionnaire].
 - 349 stakeholders participated in the evaluation out of which 48 were female.



Highlights of strengths and lessons

Design

Active engagement of stakeholders through inclusive and joint implementation approach.

Capacity building

Trainings, tools, knowledge and procedures

Control Strategies

Community based FMD control strategy good foundation and network of Animal Health Workers

Monitoring and Evaluation

Outputs, outcomes and risk factors well captured

Theory of change and assumption on FMD control strategy

Assessing the impact of the training into practice; on job coaching process

Continue allocation of resources (CBS) National /RBSP ; incorporate lesson into RBSP

ME system progress, learning and adapt. Mechanism to capture lessons learned

FINAL EVALUATION



Design

Capacity building

Control Strategies

Monitoring and Evaluation



Findings (Lao PDR)

- Gains in capacity (skills and knowledge), with tools, methods and procedures established: solid foundation for future initiatives in FMD control.
- Valuable information on FMD epidemiology and the factors that enabled and hindered progress towards outcomes were identified.
- Although the target vaccination coverage was not achieved: significant increase in the number of households engage in vaccination and non-vaccination FMD control measures.
- Changing farmers' priorities in favor of adopting FMD control strategies was not straight forward : incentives and barriers.





Findings (Myanmar)

- Excellent progress was made in achieving the short- and medium-term outcomes with the vaccination coverage being sustained.
- Gains in capacity (skills and knowledge), with tools, methods and procedures established that provide a solid foundation for future initiatives in FMD control.
- The methods for engaging smallholder farmers by the Project have worked effectively.
- Vaccinations contributed to the livestock production and annual income is unclear due to factors beyond Project control.
- High national commitment to the FMD control: endorsement of the RBSP for FMD control and the continued investment in activities post project and development of control zone. (Lao and PDR and Myanmar)
- Sustained funding for FMD control? (Lao and Myanmar)



Findings (Regional)

- The regional dimension of the Project made important contributions to FMD control in Lao PDR and Myanmar, as well as regionally for those countries that participated in the regional events.
- The experiences from Lao PDR and Myanmar indicate the crucial importance of adapting the FMD control strategy to the context. While the core elements of the FMD control strategy are all required, how these elements are applied and adapted will likely vary between countries.
- The regional dimension also sustained and emphasised the strategic importance of taking a regional approach to FMD control.





Recommendations

- Emphasis on community based FMD control strategy.
- Integrate findings of the evaluation to update risk based strategic plans for FMD control.
- Further investigate why some FMD control elements are working well and others less well, derives lessons, make recommendations for what has to be strengthened/modified, implement the recommendations, and continue monitoring.
- Continue capacity building , training, software, and materials for national VS staff to analyse the PVM and socioeconomic data themselves.





Recommendations

- Combine social science studies and expertise to compliment veterinary expertise.
- Integrate gender and social equality into the community based FMD control strategy.
- Review the Veterinary Para-professionals training and develop an integrated and systematic “training and on-the-job coaching” process.
- The long-term support would focus on securing a sustainable access to FMD vaccine and on-going strengthening of veterinary services through the PVS Pathway.
- Strengthen mechanism of M&E , lessons sharing to improve and adopt.





Lessons learned

- Building horizontal capacities of Veterinary Services was reconfirmed as a valuable investment and an important takeaway for the Project.
- Wide range of science based resources, methodologies, tools developed, piloted and tested by the Project supported FMD control, and have become references for the VS within the country and partner countries.
- Risk communication and awareness raising continue to play a significant role in disease prevention and control strategies. There is also increasing need to adopt these awareness raising measures to communication habits of farmers, including social media.
- A whole of society approach (government, industry, farmers and traders) will be needed to contribute to the endeavour of FMD control and potential eradication in future.



THANK YOU

Acknowledgement :

- Ministry of Foreign Affairs and Trade (MFAT), New Zealand.
- Ministry of Primary Industries (MPI), New Zealand.
- The EpiCentre, Massey University, New Zealand.
- Department of Livestock and Fisheries (DLF).
- Livestock Breeding and Veterinary Department (LBVD).
- Dr Karen Iles, M&E consultant, UK.
- Regional Reference Laboratory (RRL), Pakchong, Thailand.
- World Reference Laboratories (WRL) ,Pirbright, UK.
- Consultants, experts, partners, and all stakeholders directly or indirectly supported the Project.
- World Organisation for Animal Health (WOAH).

