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SEACFMD Laboratory Network Meeting

Current FMD Laboratory Activities in Cambodia

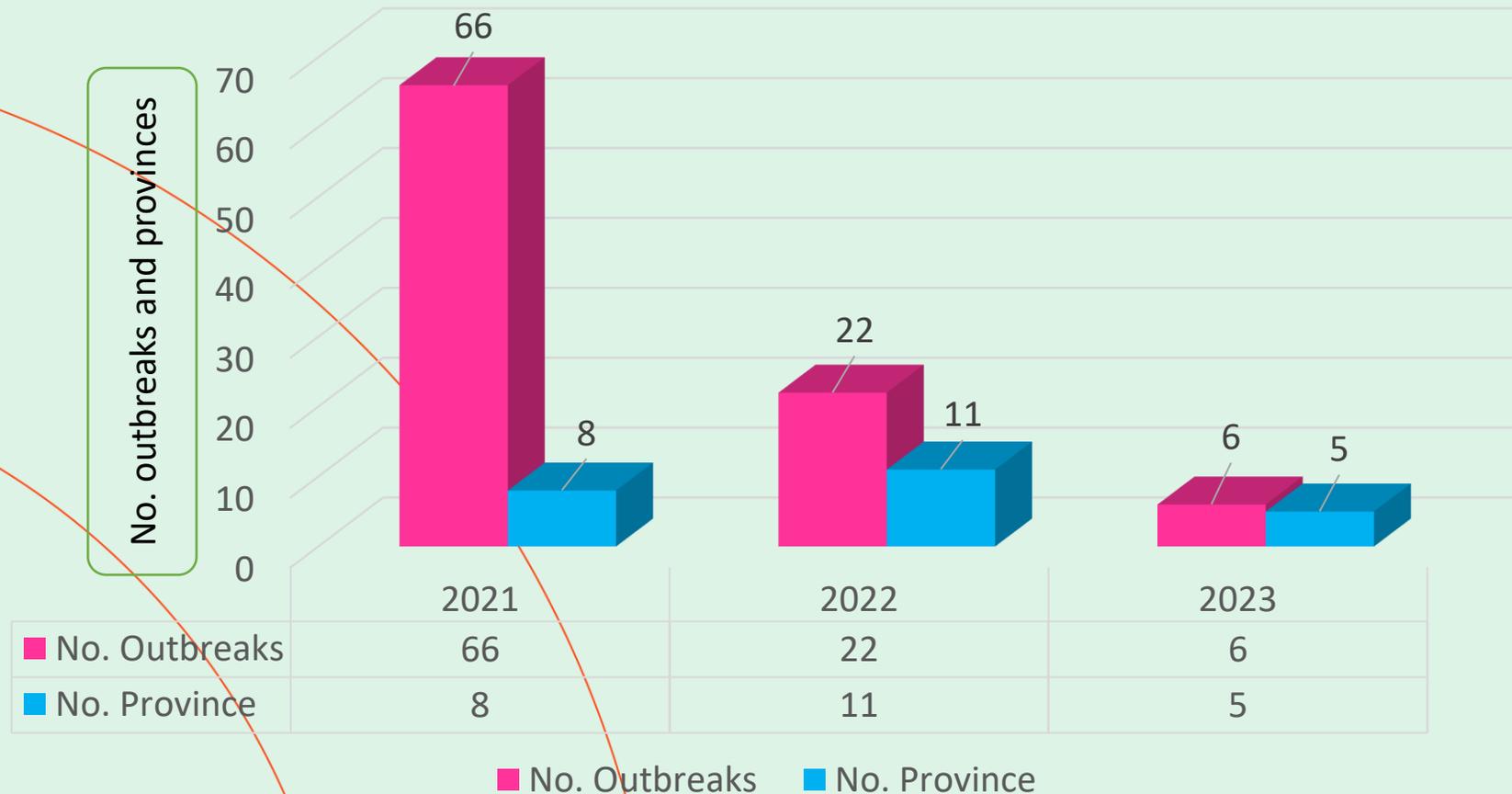
Dr. Ren Theary
*Deputy Director of National Animal
Health and Production Research
Institute*

24-25 October 2023
Lanzhou, China



Cambodia FMD situation in 2021-2023

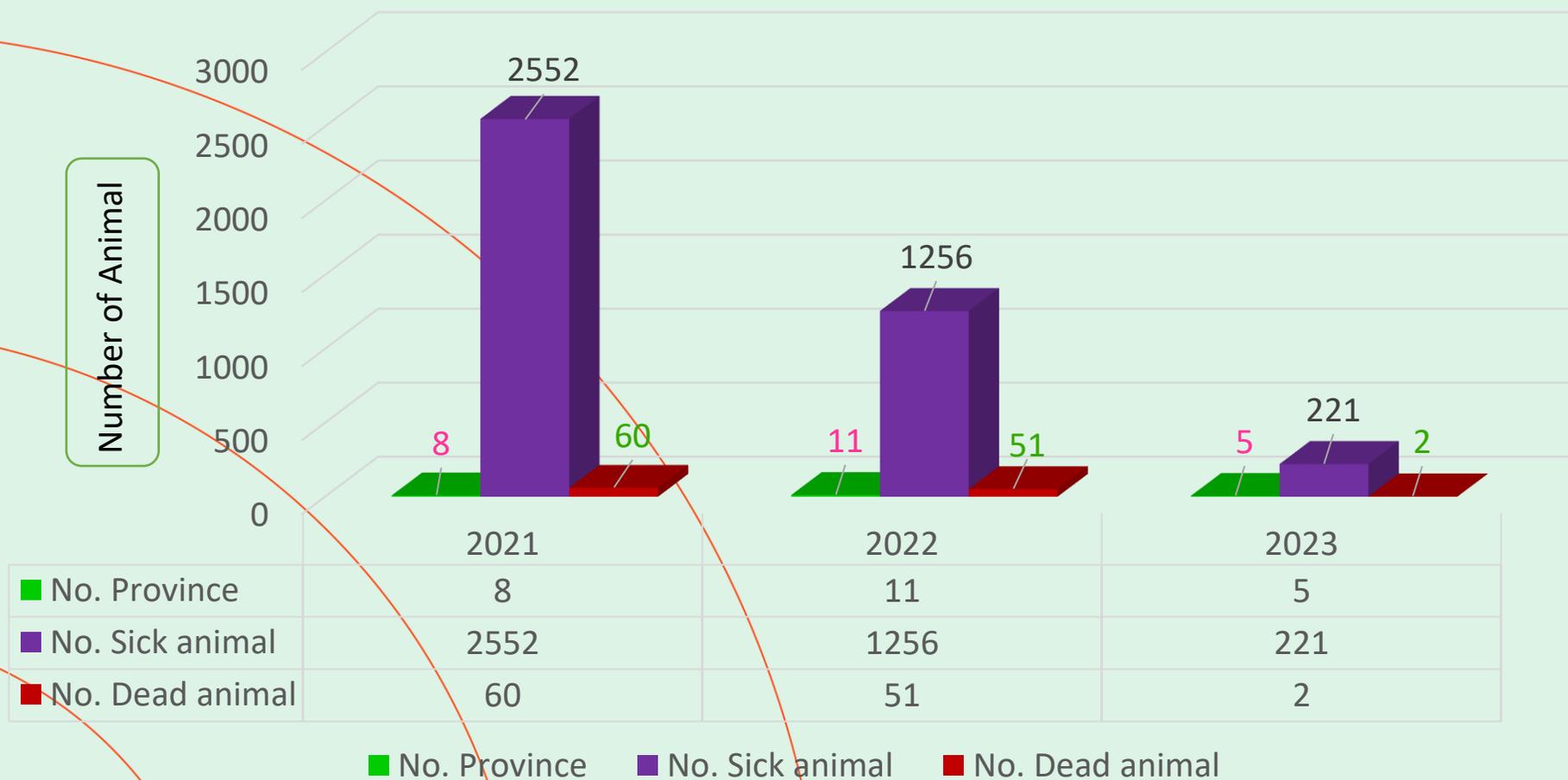
FMD outbreaks distribution





Cambodia FMD situation in 2021-2023

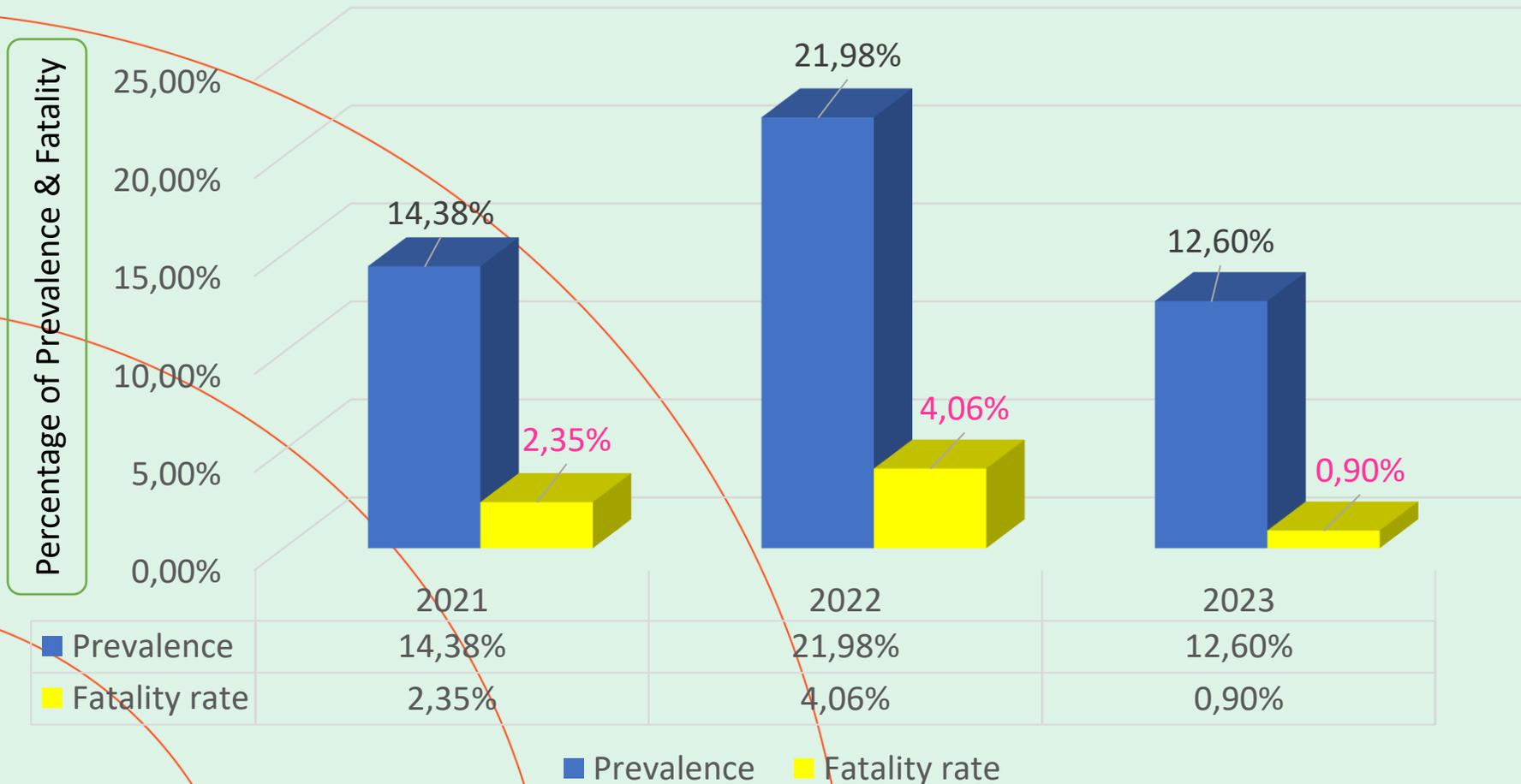
Number of animal sick and dead in Provinces





Cambodia FMD situation in 2021-2023

Number of Prevalence and Fatality rates





- ❖ National Animal Health and Production Research Institute (NAHPRI) was jointly operated with the Mahidol Oxford Tropical Medicine Research Unit (MORU) have conducted surveillance program at abattoir of cattle and pigs in seven provinces and municipal within Cambodia (Battambang, Takeo, Kampong Cham, Siem Reap, Kandal and Prey Veng provinces and Phnom Penh city)
- ❖ Surveillance
 - ✓ Passive surveillance (monthly report from farmers, VAHWs, POAHPs, hotline, Telegram and social media (Facebook..))
 - ✓ Active surveillance (Routine surveillance and emergency surveillance), small funded from Government to conduct all diseases suspected, but it is not specific for FMD only.

FMD Virus characterization (serotyping and genotyping) result:

Year	Number of samples received at National Laboratory	Number of samples tested	No. of serotype O viruses	No. of serotype A viruses	No. of serotype Asia 1	Unknown type (3D)
2021	32	32	12			11
2022	47	47	12			
2023	30	30	9			5
Total	109	109	33			16



FMD Virus characterization (serotyping and genotyping) result:

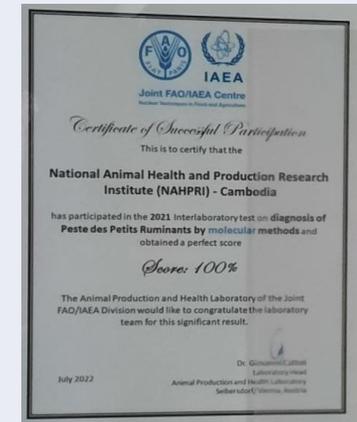
	Number of samples send to RRL and WRLFMD	O/ Mya-98	O/ PanAsia	O/ Cathay	O/ Ind2001e	A/ SEA-97	Asia 1
2019	9 (WRLFMD)						
2020	} Not yet sending samples						
2021							
2022							
2023							
Total							

* Please specify the laboratory name like RRL/WRLFMD or name of Lab in bracket



Proficiency testing during the past 5 years

Type of test	Type of programme	Organizer	Participating date/year
ELISA	PT	RRL	2019
Molecular methods	Interlaboratory test on diagnosis of PPR	FAO/IAEA	2021





Qualification ISO/17045 or other

Framework	Assured Organization	Participating date/year
- Training on quality management system - Prepare some SOPs	DTRA (Defence Threat Reduction Agency)	2018-2020
- Revise of SOPs	SEALAB (South-East Asia Lab Network)	2021-2022
- Training on ISO 17025	UNIDO (United Nations Industrial Development Organization)	2023
- Support technical and quality management	IPC	To monitor the lab capacity and quality assurance

- ❖ Lack of monitoring of the vaccine and investigating the efficacy of the vaccine in the field
- ❖ Lack of the National vaccination programme and the control strategy of the disease
- ❖ Do not have a program to conduct serological surveillance for detecting antibodies titers that can efficiency protection disease



- ❖ The project research was supported by the research grants from the Animal and Plant Quarantine Agency, (Project No. I-1543082-2018-22-02), South Korea. **Identification of Foot-and Mouth Disease Virus sequence of VP1 coding to recent field viruses.**
- ❖ The project funded by the Biological Threat Reduction Program (BTRP)-Defense Threat Reduction Agency (DTRA) of the US government. **Foot-and Mouth disease Non-Structural Protein seropositivity in cattle and pigs.**



Challenges:

- ❖ Poor biosecurity practice at farm level
- ❖ Lack of FMD vaccine coverage through country
- ❖ Illegal animal movement
- ❖ Disease reporting system
- ❖ Limited lab supplies support from government for lab diagnosis, surveillance and research
- ❖ Lack of capacity of vaccine matching and post vaccination monitoring
- ❖ Lack of capacity of bioinformatics technology.

Way forward:

- ❖ Enforce good biosecurity practice at farm level
- ❖ Increase vaccination coverage
- ❖ Follow existing legislation for disease control and prevention
- ❖ Encourage stakeholder collaboration in reporting for control and prevention
- ❖ Strengthen lab capacity of molecular epidemiological and serological surveillance systems
- ❖ Encourage farmers follow by Prakas549 of GDAHP to apply and registration their farms.



Thank You