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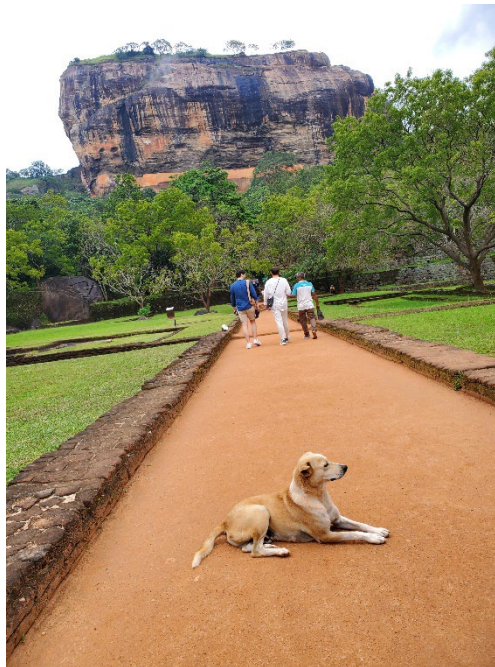


## Fourth Meeting of the South Asia Rabies Laboratory Network (SA-RABNET)

**Wednesday, 29 October 2025, Zoom®, 3 PM Japan Time (GMT+9)**

**(10:30 am Kabul; 11 am Islamabad; 11:30 am Colombo and New Delhi;  
11:45 am Kathmandu; 12 pm Dhaka and Thimphu)**

### MEETING REPORT



*Photo credit: Kinzang Dukpa*

Report prepared by: Kinzang Dukpa, WOAHR RAP (Secretariat of SA-RABNET)

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## SUMMARY

The World Organisation for Animal Health (WOAH) Regional Representation for Asia and the Pacific (RRAP) in collaboration with Karnataka Veterinary Animal and Fisheries Sciences University (KVAFSU), India, organized the Fourth Meeting of the South Asia Rabies Laboratory Network (SA-RABNET) on 29 October 2025. A total of 24 attendees, including 16 Network Members (see annexure 1) from seven South Asian Association for Regional Cooperation (SAARC) Members (Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka) attended the meeting. A series of presentations were made on topics such as updates from the Members on recent progress made in rabies diagnosis and surveillance since the last meeting. WOAH and KVAFSU also made presentations recent activities conducted including a technical presentation from WOAH Reference Laboratory (KVAFSU) on use of molecular epidemiological techniques to support rabies prevention and control.

Based on the challenges faced by the Members, the way forward would be for Members to participate in laboratory proficiency testing to strengthen quality of diagnostic services and the need for WOAH and partners to support Members in quality vaccine production/supply including accessing quality rabies vaccine virus strains.

Dr Barun Sharma from Nepal as the incumbent Chair, chaired the 4<sup>th</sup> Network meeting of SA-RABNET.

## BACKGROUND

To achieve the global goal of elimination of dog-mediated human rabies by 2030, an important component to focus on is the surveillance of animal rabies to provide accurate data in countries for timely and appropriate control measures. Although rabies poses significant public health concerns in South Asia, there is a general lack of ground-level surveillance owing primarily to insufficient or total lack of rabies diagnostic capacity across the region.

Since 2020, to support capacity building for rabies diagnosis and surveillance in animals in South Asia, WOAHRAP jointly with the KVAFSU-WOAH Reference Laboratory for Rabies in India organised [virtual training on brain sampling and diagnosis of rabies](#) in animals in 2020, [rabies serology in 2021](#) for the SAARC Member States.

As a follow up to the virtual trainings and as per the demands of the Members, WOAHRAP and KVAFSU jointly organised a virtual workshop on “[Proposed South Asia Rabies Laboratory Network](#)” on 14 July 2022 to introduce the concept of establishing a sub-regional rabies laboratory Network for South Asia to strengthen rabies diagnosis, surveillance, and control. Further, as a follow up of the virtual workshop, WOAHRAP asked the countries for nomination of two Members to initiate the activities of the Network in accordance with the proposed ToR. Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka have nominated Members of the Network. The first meeting of the Network was held on 6 April 2023 to formally launch the South Asia Rabies Laboratory Network and discuss the scope and activities to be implemented by the Network. Bhutan chaired the first three meetings of the Network supported by Nepal as the Co-Chair. At the Third Network Meeting held on 3rd March 2025, Nepal was selected as the Chair and Sri Lanka as the Co-Chair of the Meeting for a period of one year.

The 4th Meeting of SA-RABNET was held with the following objectives:

- Share Members’ updates on recent progress and follow-up actions since the 3<sup>rd</sup> SA-RABNET meeting.
- Share information on molecular epidemiological techniques for rabies diagnosis and control provided by KVAFSU, the WOAHRAP Reference Laboratory for rabies in India.

## OUTCOME OF THE MEETING

### OPENING REMARKS

Dr Kinzang Dukpa, Regional One Health Coordinator, WOAHRAP, welcomed participants and introduced the meeting objectives and key topics to be covered. Dr Hirofumi Kugita, WOAHRAP Regional Representative for Asia and Pacific in his keynote address appreciated the efforts made by the Members in keeping the forum alive and acknowledged some notable outputs from the Network activities. He also reminded the Members of the need to conduct ground level surveillance and to share data with relevant stakeholders in country and with WOAHRAP to understand the true burden of rabies. Dr. Shrikrishna Isloor, WOAHRAP Expert on rabies, shared that the activities of SARABNET are well appreciated at the global level at the WOAHRAP RABLAB meetings and reiterated that KVAFSU will soon start providing proficiency testing support to the Members.

### Adoption of the Agenda

The meeting agenda was adopted following introduction by the Chair.

### Adoption of the Meeting Report of the 2nd SA-RABNET

Following the Chair's introduction of the topic, the [Meeting Report](#) for the 3<sup>rd</sup> Network meeting was adopted with no further comments from the Members.

### Members' updates on follow-up actions from 3<sup>rd</sup> SA-RABNET and other recent actions/progress on rabies diagnosis, prevention and control activities

The Chair invited the Members of the Network to share their country updates since the last Network meeting.

#### **Afghanistan**

Dr Hamidullah Tawfiq joined the meeting. Owing to connectivity issues, Dr Hamidullah could not share live presentation on updates but shared a copy of Afghanistan's presentation with WOAHRAP. Despite challenges in terms of lack of diagnostic kits, Afghanistan reported testing of 2 dogs using lateral flow assays (LFA) and a cow tested with polymerase chain reaction (PCR) for rabies. No new brain sampling or rabies diagnostic techniques were introduced in the country since March 2025. The Central veterinary diagnostic laboratory trained zonal and provincial staff about how to collect rabies sample and information about positive results was shared with the public health ministry.

Afghanistan was supposed to contact WOAHRAP via their WOAHRAP Delegate with the request for support. They still need support for supply of rabies diagnostic kits such as conjugates for DFA kits and LFA kits.



## **Bangladesh**

Dr. Md. Sohel Rana and Dr Md. Golam Azam Chowdhury joined the meeting. Dr Sohel Rana joined the meeting as an observer given his role as the national focal point for rabies at the Department of Livestock Services (DLS) of Bangladesh. He informed about the National Rabies Strategic Plan Bangladesh (2024-2030) that has been costed and ready for implementation. Bangladesh has also updated its National Guideline on Integrated Bite Case Management (IBCM), 2025 using One Health approach. During the WRD 2025, around 70,000 doses of rabies vaccines has been distributed across the country for vaccination by district and upazila livestock offices. The country is seeing declining animal rabies cases. The Central Disease Investigation Laboratory (CDIL) continues to provide diagnostic services to both animals and humans rabies diagnosis. Bangladesh is facing challenges with mass dog vaccination (MDV) due to pause in funding to the Ministry of Health. Animal rabies vaccine production has been stopped due to lack of quality master seeds. The DLS has proposed alternative funding for MDV to the government. The DLS plans to seek support from WOAHP for vaccine production/supply.

On the query about use of oral rabies vaccination (ORVs), it was clarified that Bangladesh currently uses only parenteral vaccines but is interested in piloting of ORVs to explore potential for use in free roaming dogs.

## **Bhutan**

Dr Lungten, Dr Nirmal Kumar Thapa and Dr Tshering Choden from the Department of Livestock (DOL) represented Bhutan. Dr. Lungten presented Bhutan's rabies control efforts, highlighting that six reported outbreaks in animals were reported since March 2025, located in southern districts bordering India. Bhutan initiated several activities including setup of direct fluorescent antibody testing (DFA) at two regional laboratories (South and Eastern part), interlaboratory proficiency testing for sub-national laboratories, hands-on training on Fluorescent Antibody Virus Neutralization (FAVN) tests by experts from National Institute of Infectious Diseases (NIID) of Japan, and in-country refresher course on rabies diagnosis, surveillance and control. Bhutan is continuing its MDV activities in high-risk areas and started the second phase of its nationwide dog population management programs (NADPM) focusing on sterilization and vaccination of cats and dogs to achieve zero rabies incidence and compliance to responsible pet ownership (through microchipping of pet dogs). With the success of first phase NADPM leading to reduced dog numbers, the country is seeing an increase in cat population in some areas. Special focus on rabies control is being made in the upcoming Gelephu Mindfulness City bordering the Indian State of Assam. Rabies cases are being recorded and notified via the laboratory information management system (LIMS) and veterinary information system (VIS). Bhutan seeks technical

support for molecular diagnosis, serological tests, wildlife rabies surveillance, proficiency testing and plans to include rabies in the upcoming PVS follow-up mission.

## **India**

Dr Sharada, Dr Susan Abraham, Dr Isloor, Dr Kirthika, Dilip and other KVAFSU staff participated from India. Dr. Sharada shared updates since March 2025 and reported that 913 samples were tested with 584 positives, and that most laboratories conducted DFA and LFAs and few samples originated from wildlife in Kerala State. Two States (Maharashtra and Himachal Pradesh) reported testing of brain samples from dogs that died of other causes (other than rabies) to increase sensitivity of their surveillance system. Several trainings on animal brain sampling were held across India and rabies samples were submitted to State-level laboratories and the national laboratory at KVAFSU. Rabies surveillance in wild animals is also being undertaken with testing of foxes, jungle cats, jackals, monkeys, mongoose, tiger, deers, palm civets, and hyenas. Information about rabies diagnosis is being shared at various levels with the human health sectors especially from Tamil Nadu, Maharashtra, KVAFSU. ELISA, FAVN and RFFIT are currently being used for post-vaccination monitoring to certify pet travel purpose in various states.

## **Nepal**

Dr Barun Sharma, Dr Pragya Koirala, Dr Anil Regmi and Dr Prerna Bhattarai joined from the Department of Livestock Services of Nepal. Dr Anil informed that their national strategic plan is yet to be approved and in 2023 they reported Arctic like lineage of rabies virus circulating in Nepal. They have one central, one provincial and 5 sub-national laboratories. The lateral flow assays are used in the peripheral laboratories and confirmation is done using DFA at the central laboratory which also has PCR facilities. Notable developments are the set up of DFA and PCR testing capacity at Dhangadi veterinary laboratory and DFA at Pokhara laboratory. Nepal is using the WOAHO-recommended occipito-foramen brain sampling and conducted national training on sampling and rabies diagnosis. Awareness programs were conducted in schools and they are providing cascaded training in enhancing rabies surveillance. Since June 2023, DLS conducted training on WOAHO-recommended brain sampling to 583 veterinarians and veterinary technicians. High positivity rates for rabies was detected in recent months. There is data sharing with human health sector and they use NAHIS and LIMS for reporting. Few dogs that died due to canine distemper were tested against rabies and detected positive to rabies. Nepal is currently facing challenges in dog vaccine production owing to issues with master seed virus and inability to monitor vaccine quality due to lack of capacity to test. Colorado State University had recently



conducted a training on rabies virus neutralisation training for DLS. Nepal is seeking support from WOAHP for technical assistance in vaccine production and sourcing of rabies master seed virus.

Nepal wants to participate in proficiency testing and build capacity for RFFIT test, build capacity for quality testing of rabies vaccine, and establish DFA in all sub-national Laboratories.

### **Pakistan**

Dr Muhammad Abubakar updated Pakistan's status of rabies control and progress. Pakistan reports annual human deaths between 2,000 and 5,000 with 99% originating from dog bites. The free-roaming dog population is large with cities reporting several dog bites in a day. Most rabies control activities are undertaken in cities whereas it is largely neglected in the rural areas. The animal health sector is relatively weak in terms of disease surveillance and vaccination. In Karachi city alone, in 2025, 21 human deaths were reported with daily average of 25-23 dog bite cases. There are diagnostic facilities in human health sector at Dow University in Karachi and the National Institute of Health in Islamabad. Major constraints include lack of one health approach, lack of sensitization of policy makers for animal rabies control, weak animal disease surveillance system, limited access to modern rabies vaccines and immunoglobulins, poor dog population management and reliance on culling, and limited budget for rabies control. Although awareness campaigns are being held especially during WRD events, there is big challenge in diagnosis and surveillance especially in animal sector.

### **Sri Lanka**

Dr Pradeep Lakpriya, Dr E. R. R. Wimalasinghe and Dr W. M. A. D. Wanninayake (Anushika) attended the meeting. Dr Anushika informed that in Sri Lanka, rabies control at national level is being led by the Public Health Veterinary Services (PHVS) under the Ministry of Health in which awareness programs, mass dog vaccination and dog sterilisation are undertaken. Rabies diagnosis in animals is conducted at the Faculty of Veterinary Medicine at Peradeniya, Medical Research Institute (MRI) Colombo and Karapitiya Hospital whereas human rabies is diagnosed at MRI and Karapitiya. The Department of Animal Production and Health (DAPH) with support of Mission Rabies recently trained six veterinary investigation officers on occipital foramen brain sampling techniques and the use of lateral flow assays for rabies diagnosis. This is a landmark progress given that currently animal heads are sent to the laboratory for testing and that there is practically no diagnosis done at the field level in animals. Following this training, now even the veterinarians are sending brain samples to laboratories. Rabies diagnosis in wild animals were done in Indian otter, squirrels, Rats, Rock squirrel and gray mongoose. Positive animal rabies results were shared with human health sector in Sri Lanka. The support needed



from WOAHA included capacity for disease diagnosis, training of workforce for MDV and surveillance, and proficiency testing of laboratories.

### Updates from WOAHA RRAP

Dr Kinzang Dukpa provided the following updates:

- [Information on Veterinary Vaccines and Vaccination](#): from science to action forum at the 92<sup>nd</sup> WOAHA General Session held in May 2025 that is relevant for rabies vaccines and vaccination as well.
- Information on the recent publication from WOAHA on the use of [lateral flow devices](#) (LFDs) for field application
- Joint external rabies programme review 2025, Sri Lanka, 8-15 September 2025, to assess **the progress, challenges, and sustainability of rabies elimination efforts** and **reinforce coordination and collaboration across sectors** applying a holistic One Health approach
- 2025 United Against Rabies Forum Stakeholder Meeting, 7-9 October 2025, Bangkok. Hybrid meeting attended by human and animal health sectors from several countries in Asia (Bangladesh, Bhutan, India, Indonesia, Nepal, Sri Lanka, Vietnam).
- World Rabies Day 2025: [Youth Against Rabies Webinar](#), Act Now: You, Me, Community. 29 September 2025. WOAHA RRAP together with WHO and Nymat, a youth organisation organised a webinar titled "Regional Dialogue on Rabies Elimination".

### Updates from KVAFSU

**Dr Krithiga made the updates as follows:**

1. Developed SOPs for sample submission and shared with members
2. Providing hands-on training to SAARC member countries & support transfer of technology and capacity building
3. Initiated support for proficiency testing schemes after accreditation as PT provider

There were several other activities undertaken by KVAFSU to support initiatives on rabies control in India including providing training, participating in academic seminars, research workshops, awareness programmes and advocacy using various platform. KVAFSU recently launched a project titled "Development of indigenous recombinant adenovirus vector-based oral rabies vaccine intended for free-roaming dogs (SN ID-16)" under funding from ICMR-

MoHFW, NOHM for 3 years. Several publications have been made by scientists and researchers from KVAFSU on rabies.

## Technical presentations

### Molecular epidemiological techniques to support rabies prevention and control - Dr Shrikrishna Isloor

Dr Isloor presented in detail the principles, methods, and types of molecular tests available for rabies diagnosis including the use of phylogenetic studies for molecular epidemiology of rabies. Molecular studies can be used to have rapid response plans for new outbreaks, for real-time surveillance tools to guide rabies elimination initiatives, and can revolutionize diagnosis and surveillance of rabies and have significant contribution in the ante-mortem detection of rabies. Examples were shown of how molecular studies can be done to understand the distribution of rabies virus and how that information can be used to guide for effective prevention and control of rabies. Molecular diagnosis and phylogenetic studies enable **faster diagnosis, lineage tracing, and targeted interventions**. KVAFSU laboratory is fully committed in supporting SAARC Members in enhancing their molecular diagnostic capacity.

**Table 1. Key issues and follow up actions**

Topics/issues	Follow-ups
a. Sharing of resources and learning experiences	Bangladesh to share its IBCM guideline with the rest of the Members for information and usage (pending approval from steering committee)
b. Increasing incidences of rabies in wild animals	KVAFSU to support Members on rabies epidemiological studies in rabies cases in wild animals to understand if sylvatic cycle is present in South Asia.
c. Rabies as a transboundary issue and use of risk-based approaches for dog vaccination	Members to make use of disease epidemiology to focus mass dog vaccination based on risks. Example: Bhutan could continue focussing its MDV along the international border where disease incidence and incursion is high and also establish contacts with authorities in India for collaborative actions for joint vaccination and rapid information sharing.

d. Use of molecular techniques	KVAFSU to organise virtual training/consultations on specific molecular techniques with laboratory officials working on rabies diagnosis in South Asia.
e. Lack of diagnostic kits and reagents for DFA and LFA in Afghanistan	<ul style="list-style-type: none"> <li>a. Afghanistan to send formal request for support to WOAHH RRAP through the WOAHH Delegate</li> <li>b. KVAFSU to explore sending some conjugates</li> <li>c. WOAHH RRAP to explore for coordination with FAO/WHO in Afghanistan</li> </ul>
f. Proficiency testing	KVAFSU to support Members in conducting proficiency testing (PT) for rabies diagnostic tests

### Next Meeting of the SA-RABNET

- 👍 The Network meeting will be held after six months, May 2026 (date TBC)
- 👍 The topic (s) of the next meeting will be decided after prior consultation with the Members

### Closing of the SA-RABNET Meeting

The Chair, Dr Barun Sharma, closed the meeting by extending his appreciation to the Members of the Network for their active participation and support. He thanked WOAHH RRAP and KVAFSU for the secretarial and technical support in steering the Network activities smoothly over the last few years. He extended his best wishes to all participants and urged Members to keep in communication for continued discussion on rabies control in South Asia.

### MEETING MATERIALS

The agenda and presentations are available at the WOAHH Regional Representation website at [Third Meeting: South Asia Rabies Laboratory Network \(SA-RABNET\) - WOAHH - Asia](#)

**Annexures 1. Members who attended the 4<sup>th</sup> SARABNET**

Members	Name	Designation and Affiliation	Remarks
<b>Participants from the countries of South Asia</b>			
Afghanistan	Dr Mohammad Ibrahim Froten	Head of Epidemiology Department	Apologies
	Dr Hamidullah Tawfiq	Head, Diagnosis Laboratory, General Directorate of Animal Health and Production	Attended
Bangladesh	Dr. Md. Mostofa Kamal	Director of Research, Training, and Evaluation at the Livestock Research Institute, Department of Livestock Services, Dhaka	Apologies
	Dr Md Golam Azam Chowdhury	Principal Scientific Officer Central Disease Investigation Laboratory Department of Livestock Services	Attended
	Dr Md Sohel Rana	Focal Point: One Health and Rabies Senior Scientific Officer & Staff Officer to DG Department of Livestock Services (DLS)	Attended (as an observer)
Bhutan	Dr Lungten	Officiating Program Director National Centre for Animal Health Department of Livestock	Attended (new Member)
	Dr Nirmal Kumar Thapa	Head, Laboratory Services Unit National Centre for Animal Health Department of Livestock	Attended
	Dr Tshering Choden	Laboratory Services Unit National Centre for Animal Health Department of Livestock	Attended (new Member)
India	Dr Jyoti Misri	Principal Scientist Indian Council of Agricultural Research (ICAR) Ministry of Agriculture and Farmers Welfare	Apologies
	Dr Swapna Susan Abraham	Deputy Director (Retired) State Institute for Animal Diseases, Animal Husbandry Department, Kerala	Attended
	Dr Durlav Prasad Bora	Department of Microbiology Assam Agriculture University	Apologies
Nepal	Dr Barun Kumar Sharma	Central Veterinary Laboratory	Attended



Members	Name	Designation and Affiliation	Remarks
	Dr Pragya Koirala	Senior Veterinary Officer, Central Veterinary Laboratory	Attended
	Dr Anil Regmi	Central Veterinary Laboratory	Attended
	Dr Prerna Bhattarai	Central Veterinary Laboratory	Attended
	Dr Sujan Rana	DLS (Observer)	Attended
Pakistan	Dr Khurshid Ahmad	Director General National Veterinary Laboratory	Apologies
	Dr Ali Raza Nizamani	Senior Research Officer (Virology) Central Veterinary Diagnostic Laboratory, Sindh Province	Apologies
	Dr Muhammad Abubakar	Senior scientific officer National Veterinary Laboratory, NARC Gate 2, Park Road Islamabad, Pakistan	Attended
Sri Lanka	Dr E. R. R. Wimalasinghe	Veterinary Investigation Officer Department of Animal Production and Health	Attended
	Dr W. M. A. D. Wanninayake	Veterinary Research Officer Department of Animal Production and Health	Attended
	Dr Pradeep Lakpriya	Department of Animal Production and Health	Attended (observer)
<b>Organisers</b>			
Karnataka Veterinary Animal & Fisheries Sciences University	Dr Shrikrishna Isloor	Professor and Laboratory Director, WOAH Reference Laboratory for Rabies Veterinary College, KVAFSU	Attended
	Dr Sharada Ramakrishnaiah	Associate Professor and Quality Manager, WOAH Reference Laboratory for Rabies, Veterinary College, KVAFSU	Attended
	Dr Krithiga Dilip Other staff from KVAFSU	Veterinary College, KVAFSU, Bengaluru	Attended
WOAH	Dr Hirofumi Kugita	Regional Representative, WOAH RRAP	Attended
	Dr Kinzang Dukpa	Regional One Health Coordinator, WOAH RRAP	Attended
	Basilio Valdehuesa	Regional Communication Officer, WOAH RRAP	Attended

## **Annexures 2. Agenda**

<b>Topics</b>	<b>Speaker</b>	<b>Japan Time (+9 GMT)</b>	<b>Duration</b>
Welcome	Dr Hirofumi Kugita, WOA Regional Representative, WOA RRAP Dr N.K. Shivakumar Gowda, Dean of Veterinary College, KVAFSU	3 PM	10 min
Adoption of agenda	Dr Barun Sharma, Chair, SA-RABNET	3:10	5 min
Adoption of the Meeting Report of the 3 <sup>rd</sup> SA-RABNET	Chair, SA-RABNET	3:15	10 min
Members' updates on follow-up actions from 3 <sup>rd</sup> SA-RABNET and other recent actions/progress on rabies diagnosis, prevention and control activities	All Members in alphabetical order (5 mins each x 7) Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka	3:25	35 min
KVAFSU and WOA's updates on follow-up from 3 <sup>rd</sup> SA-RABNET	Dr Krithiga, N, KVAFSU Dr Kinzang Dukpa, WOA	4:00	10 min
Discussion	Chair	4:10	10 min
Health break/ Intermission		4:20	10 min
Molecular epidemiological techniques to support rabies prevention and control	Dr Isloor, KVAFSU	4:30	15 min
Discussion	Chair	4:45	10 min
AOB	Chair	4:55	10 min
Discussion and wrap up	Chair	5:00	5 min

*Note: KVAFSU – Karnataka Veterinary, Animal and Fisheries Sciences University (WOAH Reference Laboratory for Rabies in India); WOA RRAP – World Organisation for Animal Health Regional Representation for Asia and the Pacific, Tokyo Japan.*

### Annexure 3. Meeting participants

