

Country experiences on bovine TB/ zTB diagnosis, surveillance and control

Nepal

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**WOAH Regional Hands-on Training on
Zoonotic TB Diagnosis**
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2025





Background

- TB: A global public health and veterinary concern
- Detected in cattle, elephants, and wildlife in Nepal
- Serious public health issue with prevalence of 4160 per million and incidence of 2450 per million (National Tb survey 2018-19)
- Threat to One Health (human, animal, environment)
- Implemented Elephant TB Control Plan during 2011-15 and now included in annual program of DNPWC

Nepal Elephant Tuberculosis Control and Management Action Plan (2011-2015)



Ministry of Forests and Soil Conservation
Department of National Parks and Wildlife Conservation
Babarmahal, Kathmandu
Nepal
2011



Current Disease Situation

Test Result for Tuberculosis in Cattle (2022/23) by ELISA

S.N	District	Sample	Number of sample	Positive Cases
1	Ramechap	Serum	31	0
2	Dolakha	Serum	44	0
3	Kathmandu	Serum	141	0
4	Kavre	Serum	268	0
5	Banke	Serum	184	0
			668	-

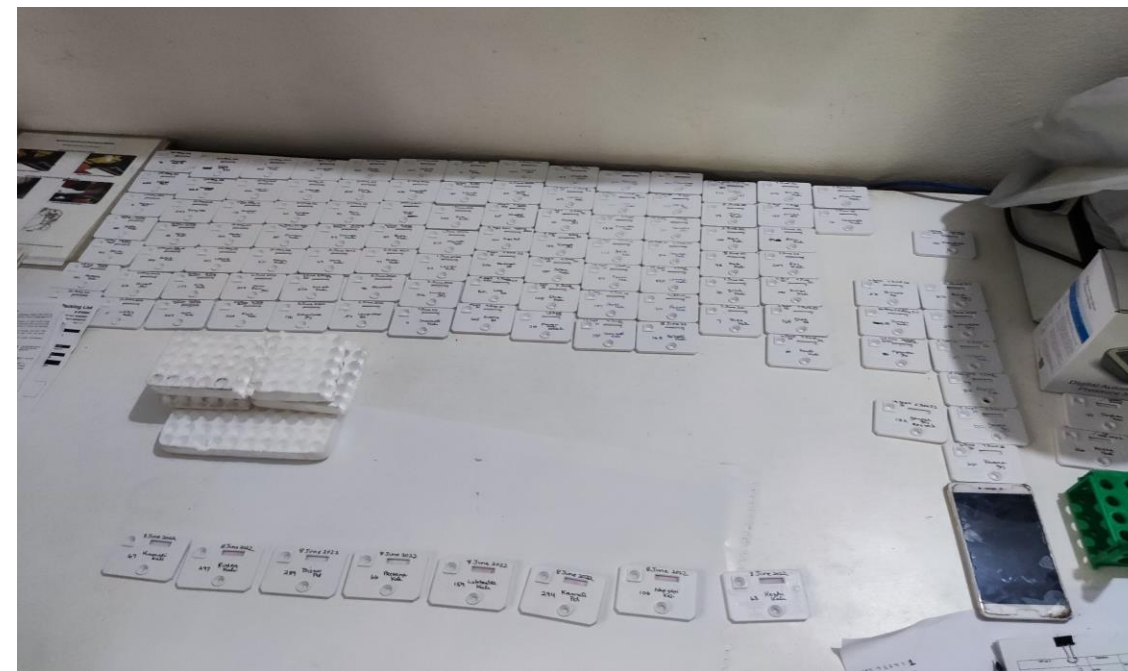


Fig: Mass DPP testing in captive Elephants (2022)

- Out of 105 captive animal tested 10 positive on Rapid test
- 5 rapid negative animals on PM showed tubercule on lungs and viscera but no growth was observed in culture



Disease Prevention and Control or Preparedness Strategy

- ✓ Sadly, Ministry of Agriculture and Livestock have no policy as such for control or prevention.

NATIONAL STRATEGIC PLAN TO END TUBERCULOSIS IN NEPAL 2021/22-2025/26 (MoHP)

Key Goals and Targets

- Reduce TB incidence rate from 238 to 181 per 100,000 population by 2025/26
- Cut TB mortality rate from 58 to 23 per 100,000 by 2025/26
- Eliminate catastrophic costs to patients and families caused by TB
- End the TB epidemic by 2035 and strive for elimination by 2050 (<1 case per million population)



Disease Surveillance

- First TB case in free-ranging one-horned rhino.

of humans by consumption of raw goat milk cheese cannot be ruled out.

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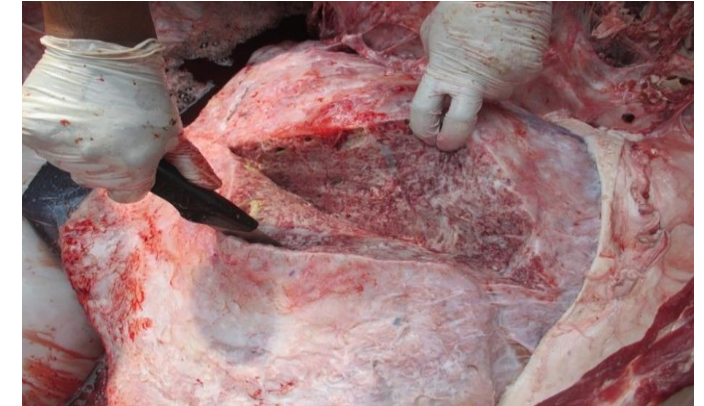
Emerging Infectious Diseases • www.cdc.gov/eid • Vol. 22, No. 3, March 2016

***Mycobacterium orygis*–Associated Tuberculosis in Free-Ranging Rhinoceros, Nepal, 2015**

Jeewan Thapa,¹ Sarad Paudel,¹ Amir Sadoula, Yogendra Shah, Bhagwan Maharjan, Gretchen E. Kaufman, Deborah McCauley, Kamal P. Gairhe, Toshio Tsubota, Yasuhiko Suzuki, Chie Nakajima

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DOI: <http://dx.doi.org/10.3201/eid2203.151929>



- Population identified: 279 elephants (Captive)
- Tested: 254 (91%) Result: 61 Positive
 - Positive animals kept on DOTS therapy
- ✓ Also done yearly by veterinary Laboratories as part of annual program





Challenges

- No clear case definition for Tuberculosis in animals.
- Limited knowledge of field staff about disease manifestation in animals.
- Limited use of specialized diagnostics.
- Resource constraints in field level diagnosis (human resource and logistics).
- Difficulties in Tb monitoring in wildlife.
- More MDR/XDR cases reported in humans and most of the people having tb are residing in a place where animal are kept together and involved in handling of animals.



Way Forward

- Expand constant surveillance (DPP, PCR confirmation).
- Establish and strength veterinary–human TB program collaboration.
- Integrate wildlife, livestock, and human health data.
- Enhance lab capacity & staff training.
- Need stronger One Health coordination.

THANK YOU

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