

WOAH's Standards, Disease Situation and Activities on Zoonotic Tuberculosis



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Regional One Health Coordinator

WOAH Regional Capacity Training on Priority Animal Disease
Control and Prevention in Asia and the Pacific
14-18 September 2026
Qingdao, China



Contents

- **Case definition**
- **Current disease situation of *Mycobacterium tuberculosis* complex (MTBC)**
- **WOAH activities at global and in the region**
- **Good practices in the Asia Pacific Region and way forward**



Case definition of MTBC

3 strains
4 families 

MTBC strains

- *M. bovis*, *M. caprae* and *M. tuberculosis*
- *excluding vaccine strains

Susceptible animals

- Domestic and captive wild animal populations
- Bovids: Cattle, Bison And Water Buffalo,
- Cervids: red deer, sika, samba, rusa, roe deer, fallow deer, white tailed and mule deer and reindeer/caribou
- Goat
- New world Camelids: alpacas and llamas.

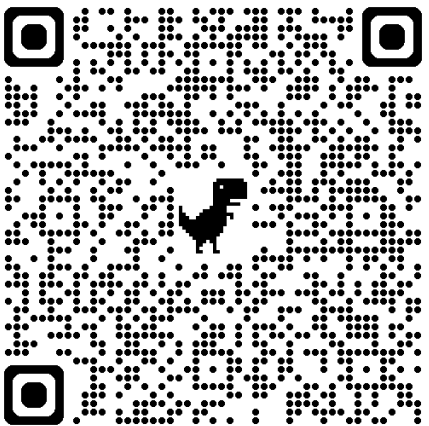
Diagnostic criteria

- Non-clinical + clinical animals both
- MTBC has been isolated from a sample from an animal or **product derived from animal**
- Positive results to a diagnostic test have been obtained, with epidemiological link to a case or there is reason to suspect



Disease notification to WOA

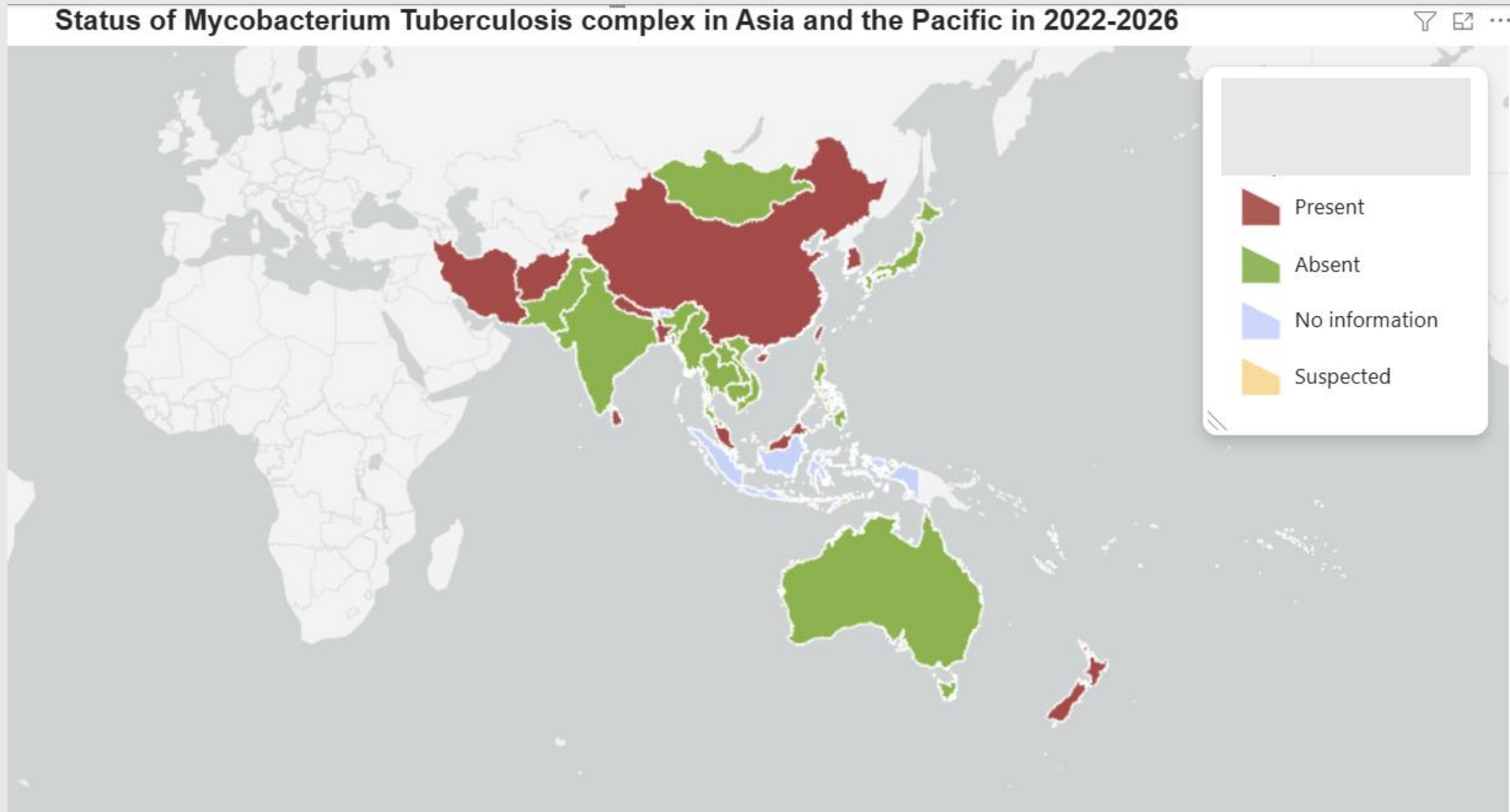
1. Bovine tuberculosis was a WOA listed disease until 2019.
2. As of 2019, it became '**Infection with *Mycobacterium tuberculosis* complex**' so as to include more *Mycobacterium* species causing tuberculosis in humans and animals.
3. For the purposes of the *Terrestrial Code*, *M. tuberculosis* complex comprises *M. bovis*, *M. caprae* and *M. tuberculosis*





Distribution of MTBC in Asia Pacific (2022-2026)

Source: WAHIS





Distribution of MTBC in Asia Pacific (2022-2026)

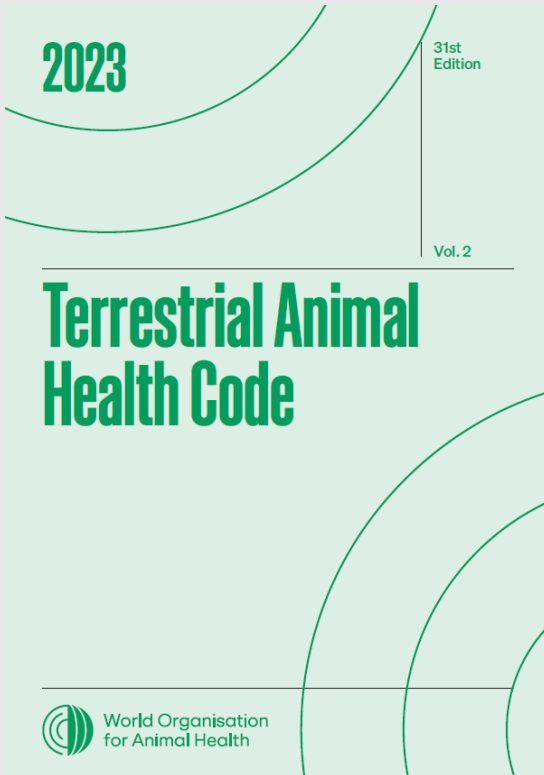
Source: WAHIS

Number of cases of MTBC by species reported by Asia and the Pacific Members in 2022-2025

Species	2022	2023	2024	2025	Total
⊕ Cattle	7097	3918	4431	2514	17960
⊕ Cervidae	157	39	47	0	243
⊕ Ferret	42	14	11	0	67
⊕ Wild boar	4	7	1	2	14
⊕ Goats		4		1	5
⊕ Red deer	4	0	0	0	4
⊕ Buffaloes	3				3
Total	7307	3982	4490	2517	18296



WOAH as a standard setting organisation



Terrestrial Code

Standards for disease control, surveillance and safe international trade

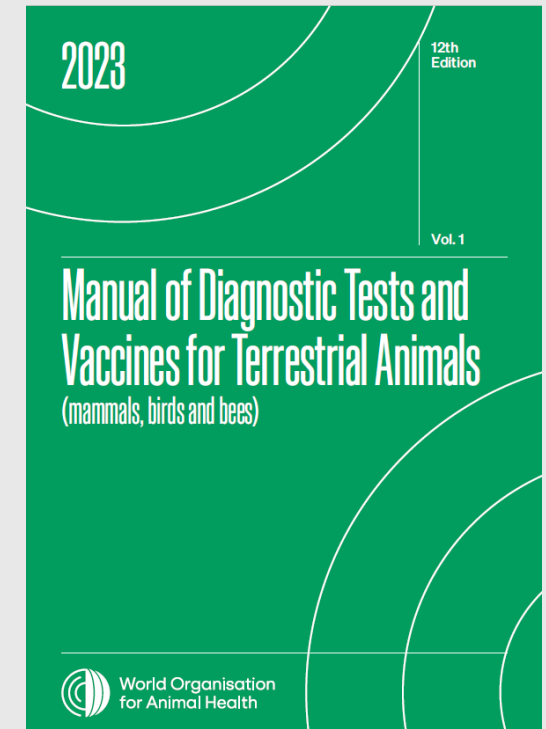
Chapter 8.12. Infection with *Mycobacterium tuberculosis* complex



Manual of Diagnostic Tests and Vaccines for Terrestrial Animals

Standards for laboratory diagnostic and vaccine production

Chapter 3.1.13. Mammalian tuberculosis (infection with *Mycobacterium tuberculosis* complex)

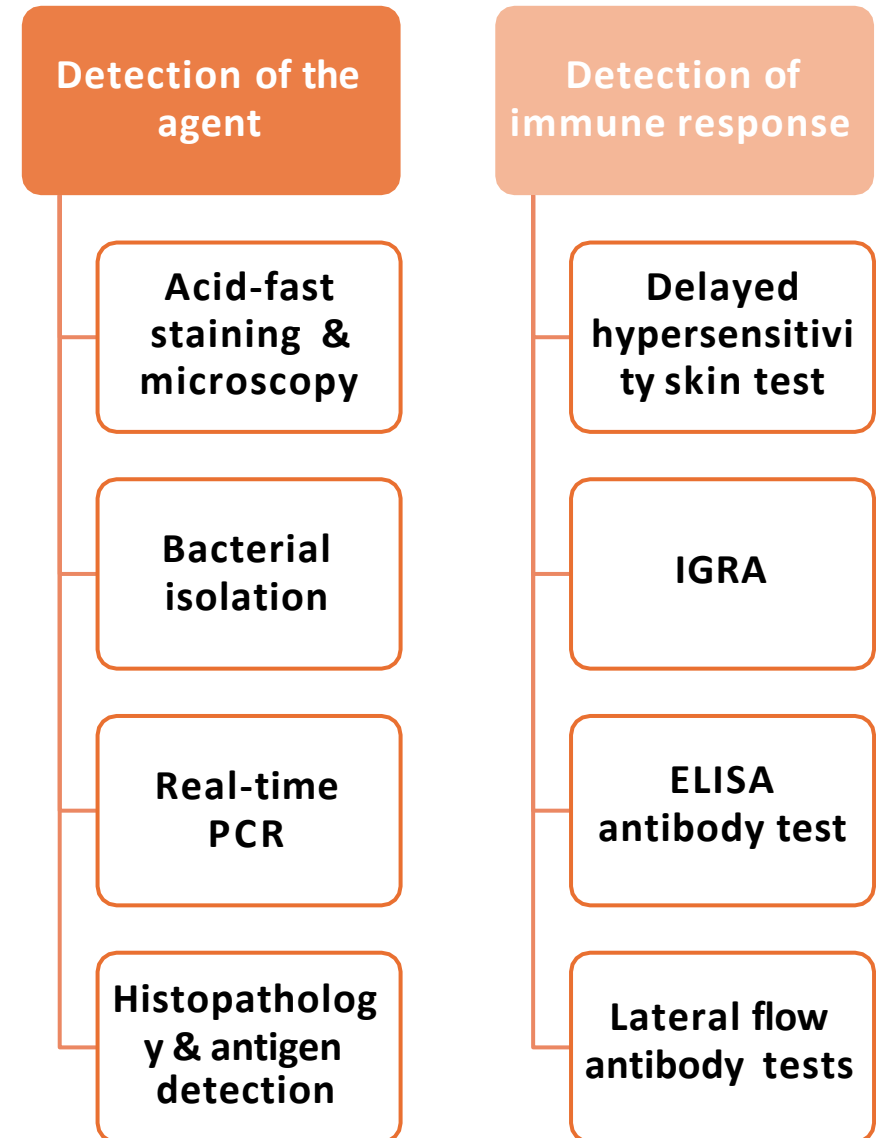




How to use Table 1

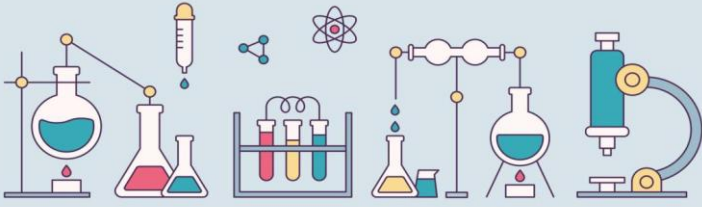
Different test for different epidemiological situations

1. Population freedom
2. Individual animal freedom (prior to movement)
3. Support eradication policies
4. Confirmation of clinical cases
5. Surveillance: Prevalence of infection





LABORATORY



Reference Lab Network to Support Our Members



Dr Bernardo Alonso
ARGENTINA

Dr María Laura Boschioli-Cara
FRANCE

Dra. Beatriz ROMERO MARTINEZ
SPAIN

Dr Mark
Chambers UNITED
KINGDOM

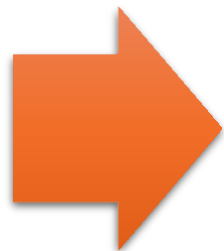
Dr. Tyler C. Thacker
UNITED STATES OF AMERICA



WOAH's Laboratory Twinning Programme

10

WOAH
Reference
Laboratory or
Collaborating
Centre



Candidate
laboratory

Bovine
Tuberculosis: UK –
P.R. China (2023-)

CAPACITY BUILDING



TRAINING



LEARNING



KNOWLEDGE



SKILL



COUCHING



SUPPORT



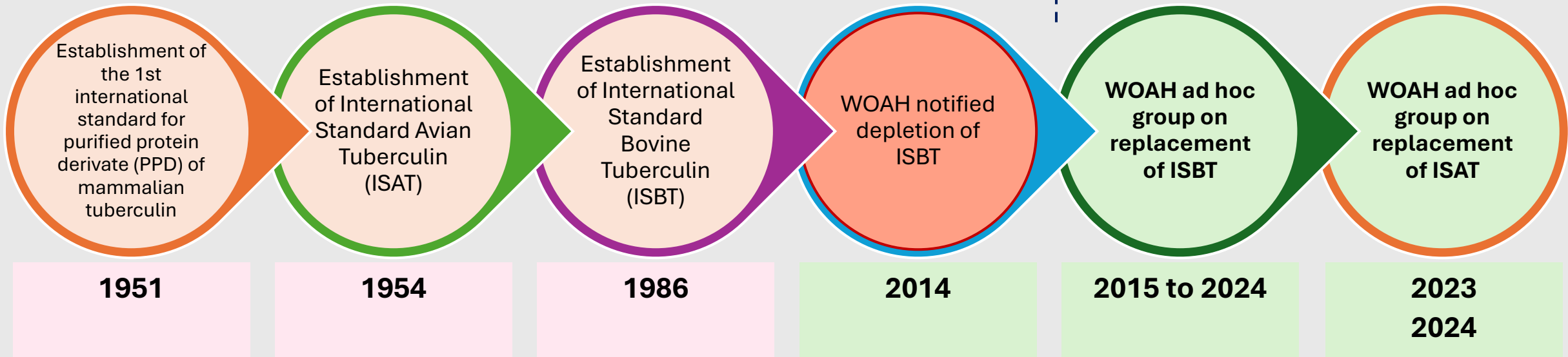
DEVELOPMENT



Replacement of international standards ISBT and ISAT

The ISBT (International Standards for Bovine Tuberculin) & ISAT (International Standards for Avian Tuberculin) is used as a reference standard for quality control tests for purified protein derivative (PPD) bovine tuberculin that are used in bTB surveillance, diagnosis and export certification.

**Establishment & meeting of
WOAH *ad hoc* group**



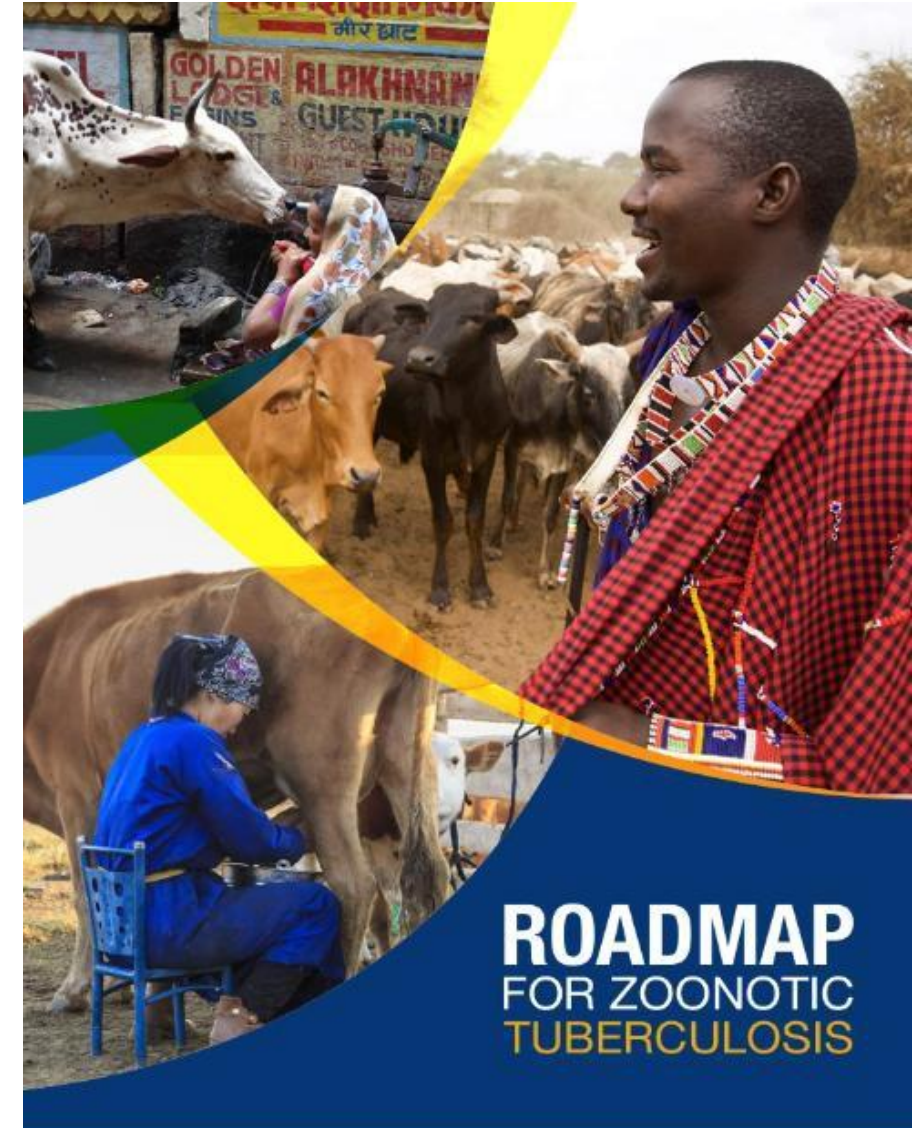
Reducing TB
prevalence in
livestock.

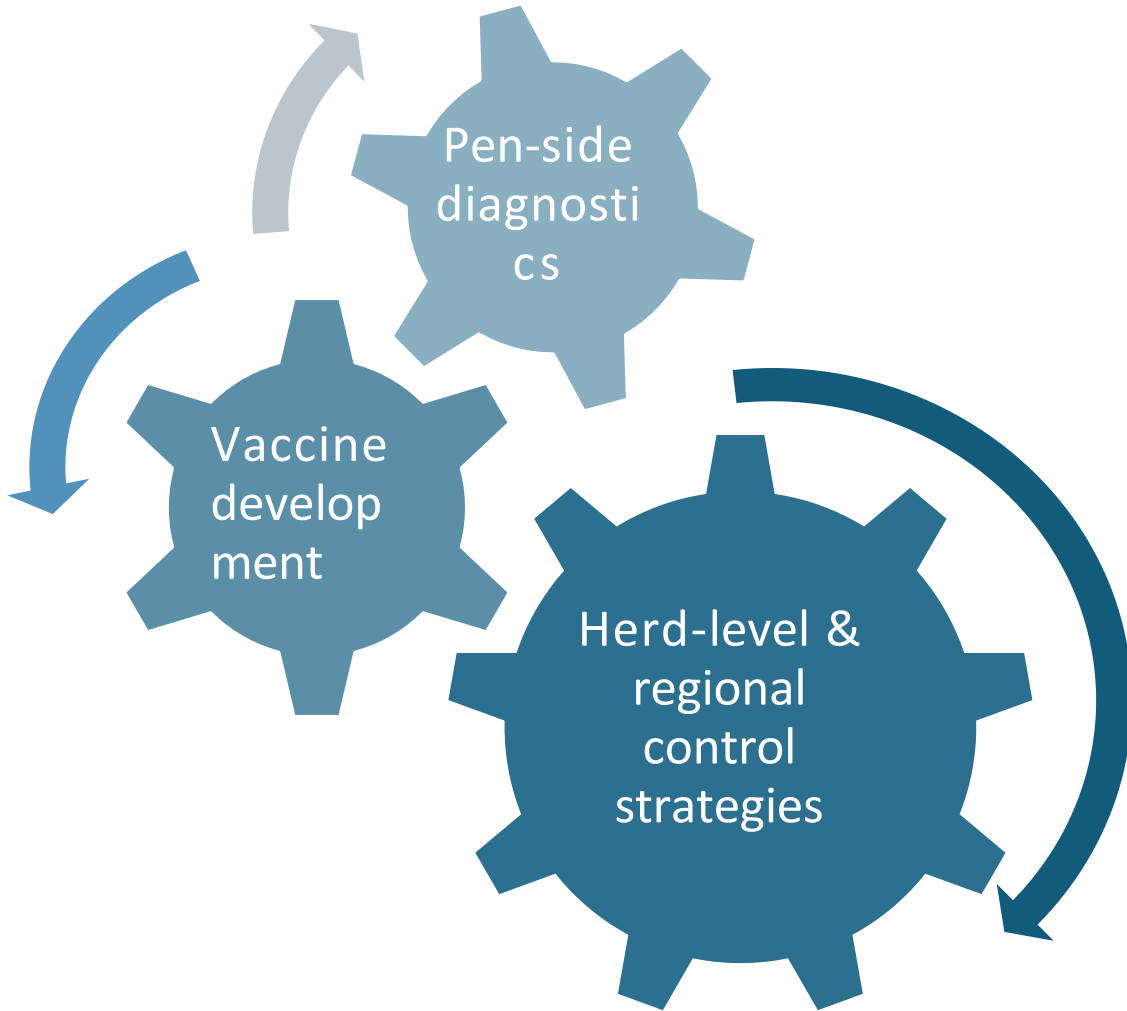
Develop guidelines
for control of TB in
livestock

Priorities –
One Health

Implement
community-based
interventions

Consider cultural
and socioeconomic
factors





STAR-IDAZ
International Research
Consortium on Animal Health



**Roadmap for the development of candidate vaccine for bTB
published 2024**



Guidelines for the control of *Mycobacterium tuberculosis* complex in livestock

Beyond test and slaughter



World Organisation
for Animal Health



Use community-based interventions
Reduce burden of disease in animal
Recognizing cultural and
socioeconomic differences

FLEXIBLE

ADAPTABLE

SCIENCE - BASED



2. Where to Start

- 2.1. Current status of bovine tuberculosis in the country
- 2.2. Resources and infrastructure
 - 2.2.1. Regulatory frameworks and control programmes
 - 2.2.2. Technical capacity and training
 - 2.2.3. Resource mobilisation
 - 2.2.4. Stakeholder and partner engagement
 - 2.2.5. Awareness and communication

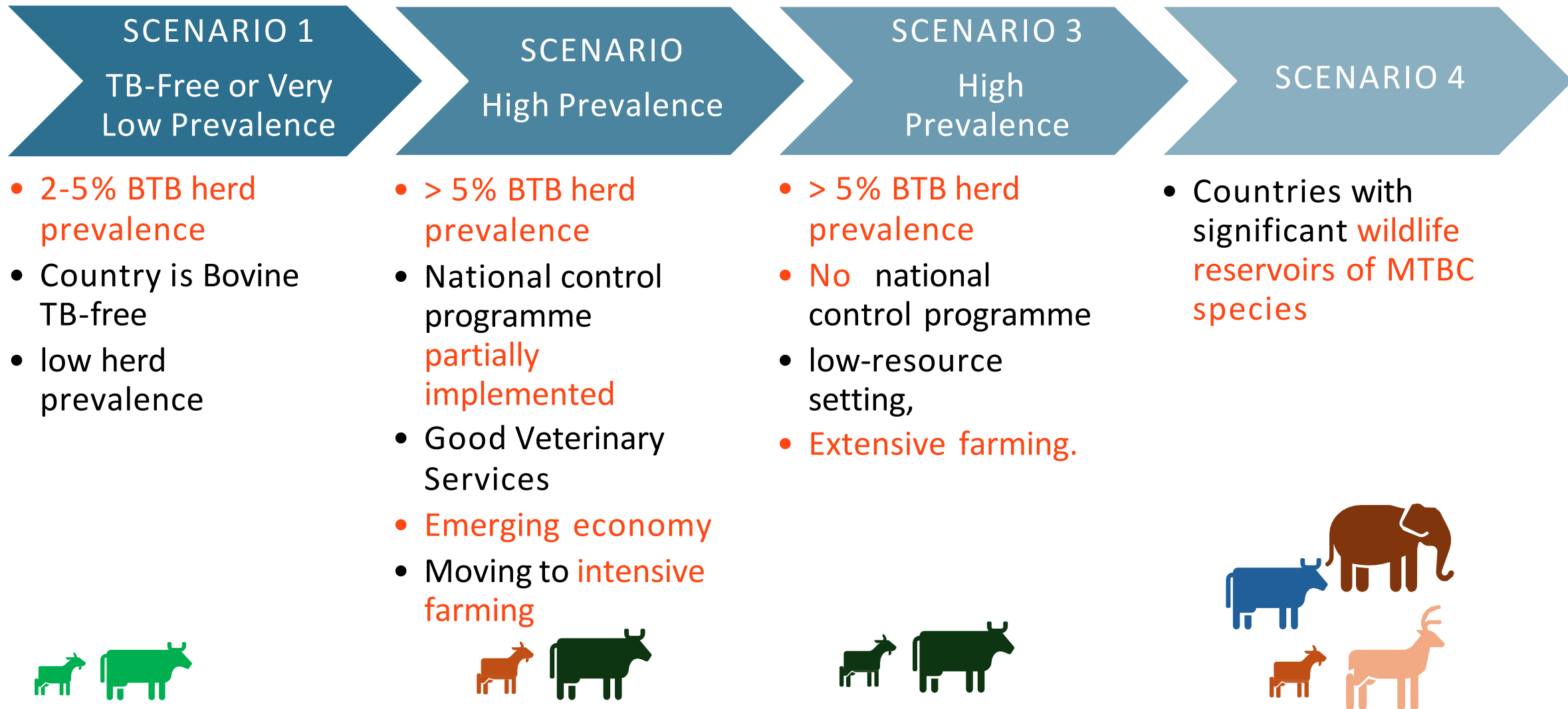
3. Control Strategies

- 3.1. Surveillance
 - 3.1.1. *Ante-mortem* surveillance
 - 3.1.2. *Post-mortem* surveillance
- 3.2. General biosecurity, disease management and targeted control
 - 3.2.1. Reducing intra- and inter-herd transmission of MTBC species
 - 3.2.2. Wildlife-livestock interactions and risk of transmission of MTBC species
 - 3.2.3. Reducing the risk of zoonotic transmission

ANNEX 1

Scenarios for countries with different resource availability and epidemiologic settings

Includes Best practices and short guidance summaries



Regional Workshop on Zoonotic Tuberculosis, Qingdao, P.R. China, 24-26 September 2024

1. **Capacity** for disease detection and surveillance
2. Institute/implement **legislations** and **regulations** on farm registration, animal traceability, animal movement and farm biosecurity
3. Develop costed and time-bound **national action plans** for zTB in coordination with human health and other sectors.
4. Conduct routine **surveillance** for zTB to produce data on disease prevalence/burden,
5. Promote **public-private partnerships** in areas of compliance to farm biosecurity, disease reporting, disease surveillance, disease control, and compensation mechanism for “test-and-cull” method.
6. Establish national and sub-national networks/platforms including **One Health collaborative** mechanisms



Building diagnostic capacity for Zoonotic Tuberculosis

WOAH Regional Training on Zoonotic
Tuberculosis Diagnosis, 1-5 September 2025,
Qingdao, China P.R.



Best practices in control and elimination of Bovine TB

JAPAN

- free from infection with *M. tuberculosis* complex in bovids (WOAH Self declaration in April 2021)
- The last time that the causative agent was isolated was in 1999.
- Risk-based active surveillance

AUSTRALIA

- free from infection with *M. bovis* since December 1997. last case 2002.
- Key strategies for maintenance of freedom
 - Abattoir monitoring
 - Periodic testing of cattle herds
 - Wildlife surveillance

CHINA

- Advances in disease diagnostic (reference materials) including molecular and rapid detection tests, droplet digital PCR and whole genome sequencing,
- Active surveillance
- WOAHLaboratory twinning between CAHEC and UK APHA
- More than 50% of large-scale dairy farms to achieve elimination or disease-free Status by 2030

THAILAND

- As of 2023, surveillance showed Zero prevalence in dairy herds (> 62K cattle heads tested)
- No evidence of *M. bovis* infection in humans
- First-test-and-segregation program and later test-and-slaughter



Current Challenges and Opportunities

19



Data

- Burden of mammalian TB
- Quantify the public health risk of mammalian TB

Case for investment

- Prioritisation among other zoonotic diseases
- Resource mobilisation
- Increase the political will

Technical

- expert's opinion (e.g. diagnostic, surveillance, wildlife reservoir, strain typing/genotyping)
- One health



Thank you!

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