



4th FAO-APHCA/OIE/DLD

**Regional Workshop on
Brucellosis diagnosis and
Control in Asia-Pacific region**

Country presentation

BHUTAN

B. B. BHANDARI

LIVESTOCK POPULATION (*Census 2012*)

| Sl. | Species | Population (heads) |
|------------|----------------|----------------------------|
| 1 | Cattle | 2,98,916 |
| 2 | Sheep | 10,783 |
| 3 | Sheep | 39,019 |
| 4 | Horse | 22,600 |
| 5 | Pig | 19,191 |
| 6 | Buffalo | 740 |
| 7 | Yak | 38,011 |
| 8 | Poultry | 5,49,733 |
| 10 | Mithun | 1,559 |

Background

In Bhutan, the animal health surveillance in food animals in terms of food-borne disease is at its initial phase.

The integration of surveillance programs for food safety implemented by various concerning stakeholders/agencies is not much in advance.

But, with time, the Department of Livestock is now achieving strength in the technical capacity through projects and collaborations.

Brucellosis situation

- Brucellosis is caused by *Brucella abortus*, *Brucella melitensis*
- Manifested by reproductive disorders
 - abortions, infertility, retention of placenta, stillbirth and calf loss in animals
 - results in huge economic losses to dairy farmers
- In humans
 - abortion, stillbirth, RoP

- Few clinical cases of *Brucella* infection in cattle observed in Sarpang, Deothang, Dagana (1998)
- Routine test conducted in samples submitted by BAFRA
 - None have tested positive to *brucella*
- Abattoir surveillance
 - 1.05% (n=382) sero positive to *brucella* (FP??) – iELISA

- Brucellosis in humans not reported
- Abortive women in Bhutan

| Year | Abortion | RoP | Stillbirth |
|--------------|-----------------|------------|-------------------|
| 2007 | 913 | 218 | 61 |
| 2008 | 928 | 439 | 62 |
| 2009 | 1057 | 168 | 51 |
| 2010 | 1190 | 199 | 48 |
| 2011 | 1339 | 220 | 47 |
| Total | 5427 | 1244 | 269 |

Source: Annual Health Bulletin 2012

Laboratory Network

BHUTAN



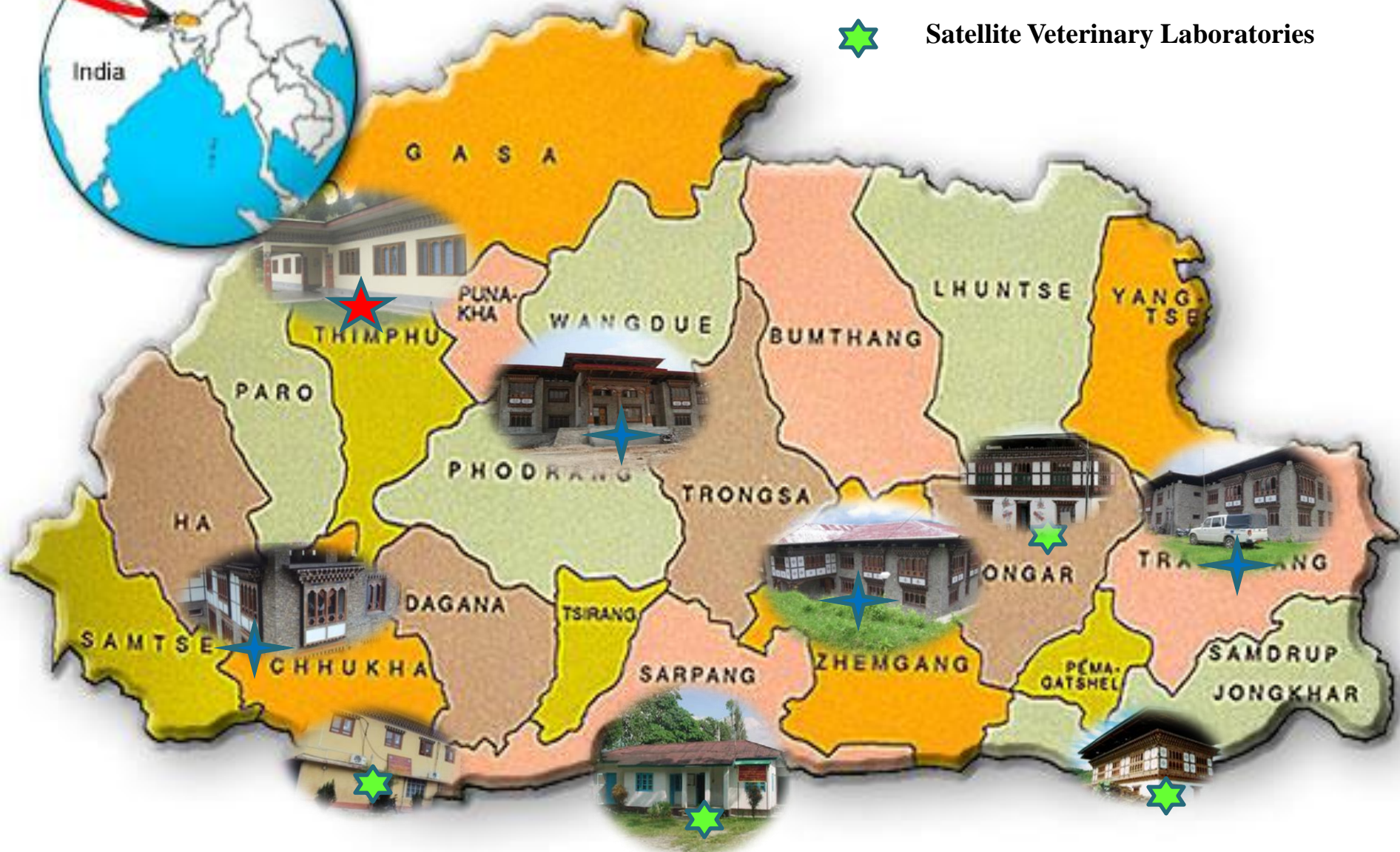
National Centre for Animal Health

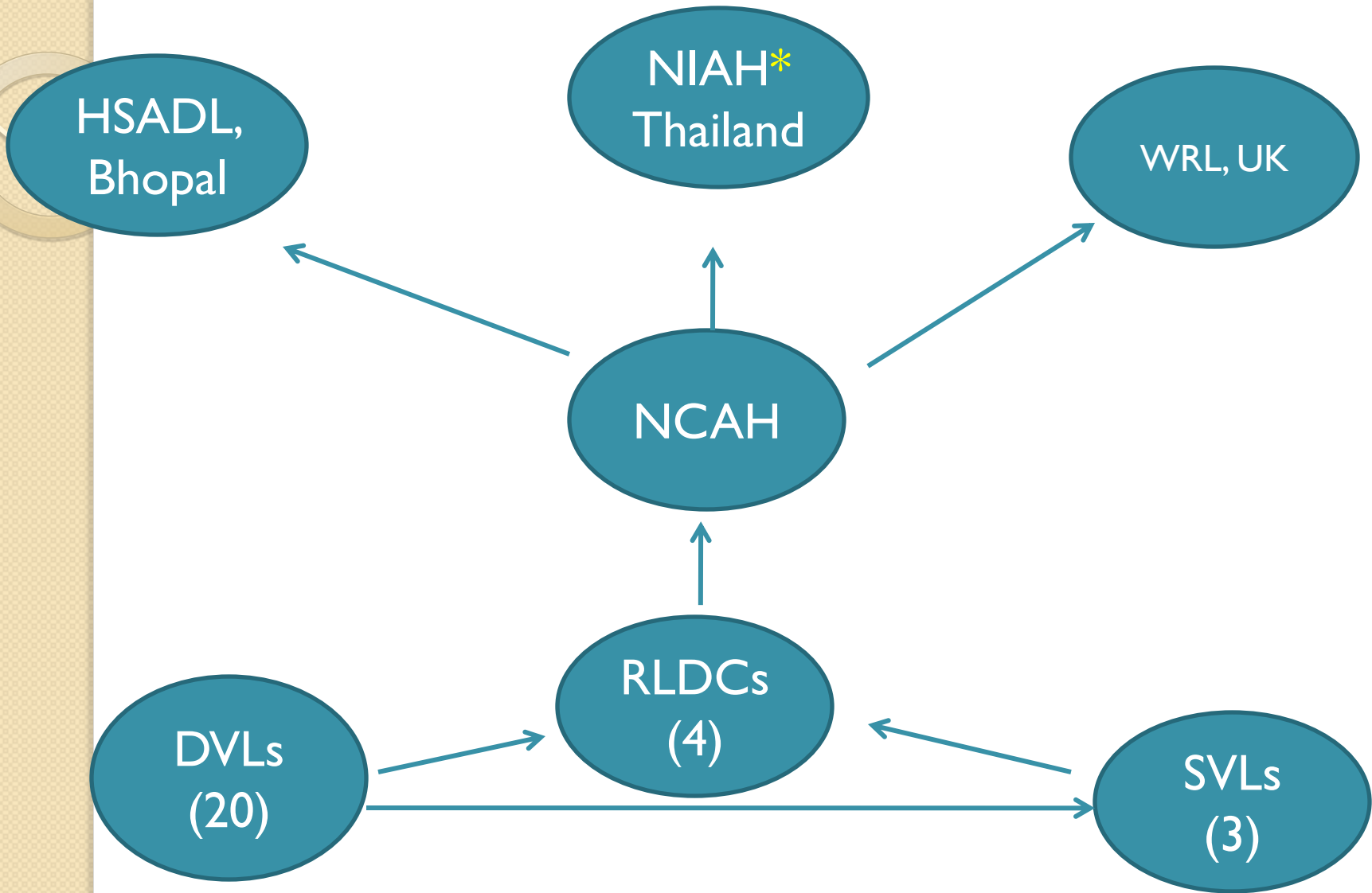


Regional Livestock Dev. Centres



Satellite Veterinary Laboratories





International references

- NIAH, Bangkok for PRRS, HPAI, Brucellosis
- Chulalongkorn University, Bangkok, Thailand on rabies
- World Reference Laboratory Pirbright, UK for FMD
- AAHL, Geelong, Australia for HPAI
- Oita University, Japan on Rotavirus, rabies
- CDC, Atlanta for anthrax
- CEIRS, Memphis for AI
- HSDL, Bhopal for AI
- OIE
- WHO
- FAO

Test results from the PT reagent provided by DLD, Thailand

Samples tested at:

- ✓ National Center for Animal Health, Serbithang, Thimphu

Date of samples analyzed:

- ✓ 01/10/2013

Date of result sent:

- ✓ 04/10/2013

Methods and procedure used:

- ✓ OIE terrestrial manual- RBT Guidelines/protocol

Equipment used:

- ✓ Enamel White tile, micro pipette, tooth pick, micro pipette tips

| Sl.no | Tube ID | Result | Interpretation |
|--------------|----------------|---------------|-----------------------|
| 1 | 133 | ++ | Positive |
| 2 | 503 | - | Negative |
| 3 | 1204 | + | Positive |
| 4 | 1633 | - | Negative |
| 5 | 808 | - | Negative |
| 6 | 1445 | - | Negative |
| 7 | 707 | + | Positive |
| 8 | 997 | - | Negative |
| 9 | 252 | + | Positive |
| 10 | 1041 | + | Positive |
| 11 | 326 | +++ | Positive |
| 12 | 1327 | - | Negative |
| 13 | 75 | +++ | Positive |
| 14 | 1505 | - | Negative |
| 15 | 679 | - | Negative |
| 16 | 430 | - | Negative |
| 17 | 1118 | ++ | Positive |

Country policy on regional collaboration on diagnosis and control of *B. melitensis*

Surveillance of the existing animal population and strict laboratory screening/monitoring of imported animals through proper collaboration with international Labs- approach towards eradication, without use of vaccine



Thank you all