



USAID
FROM THE AMERICAN PEOPLE



Strengthening and Supporting Capacity in Veterinary Epidemiology at Individual and Institutional Levels in Support of a One Health Approach

David Castellan, FAO ECTAD-RAP, Bangkok; Wantanee Kalpravidh, FAO ECTAD-RAP, Bangkok; Subhash Morzaria, FAO ECTAD-RAP, Bangkok; Gopinath Chitoor, FAO ECTAD-RAP, Bangkok; Karoon Chanachai, Thailand DLD, Bangkok; Kachen Wongsathapornchai, FAO ECTAD-RAP, Bangkok; Tippawon Prarakamawongsa, Thailand DLD, Bangkok

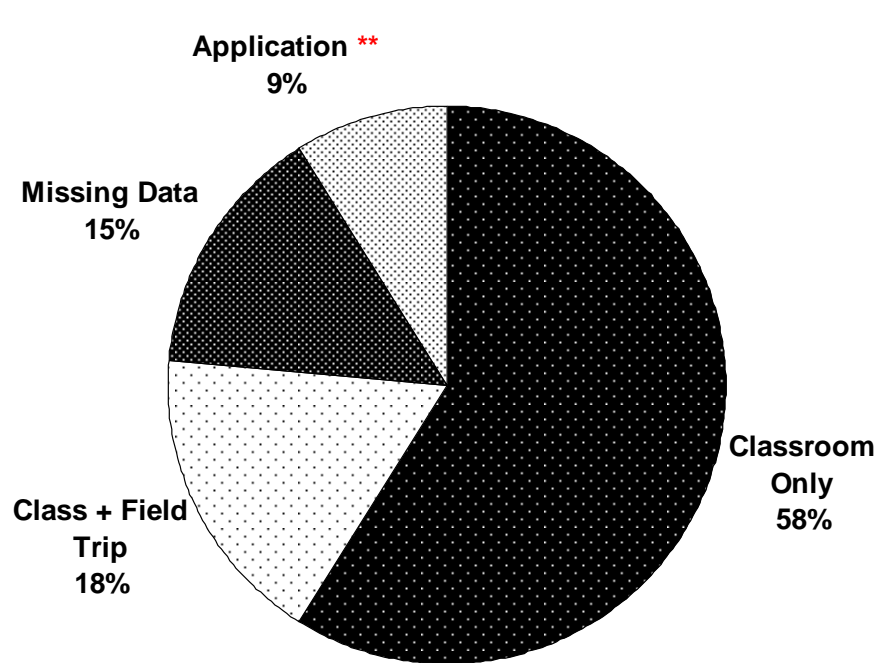
Topics



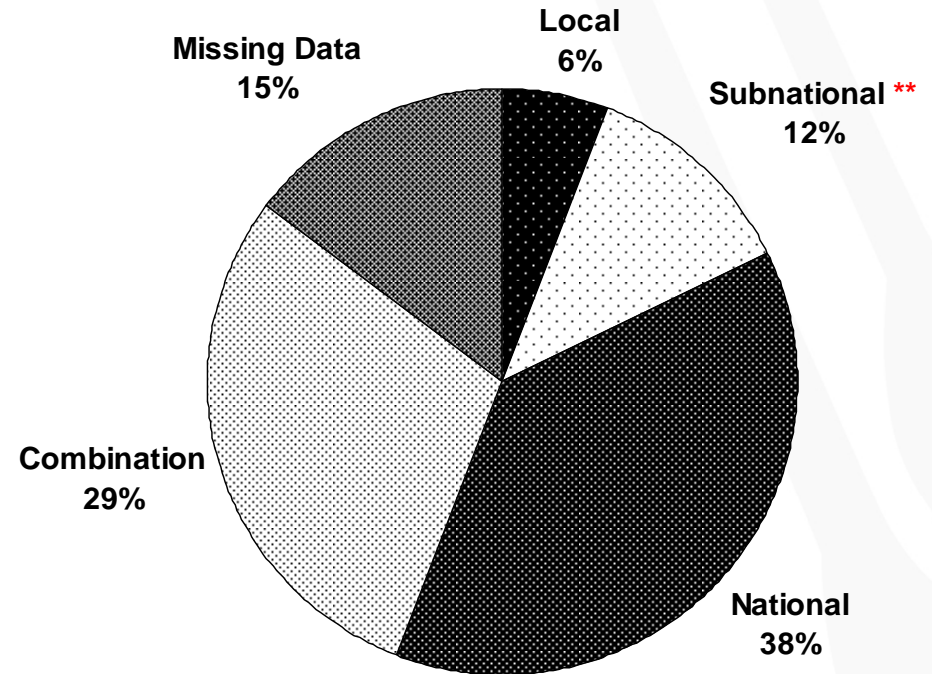
- I. Review of epidemiology training in the region
- II. Country level needs assessments
- III. Epidemiology Consortium
- IV. Country self-assessment related to institutional strengthening (CVO Meeting)
- V. The way forward



I. Regional Inventory of Epidemiology Training (2006-mid 2008)



Is there adequate emphasis on application?



Is there adequate emphasis on the sub-national level?

Lessons Learned

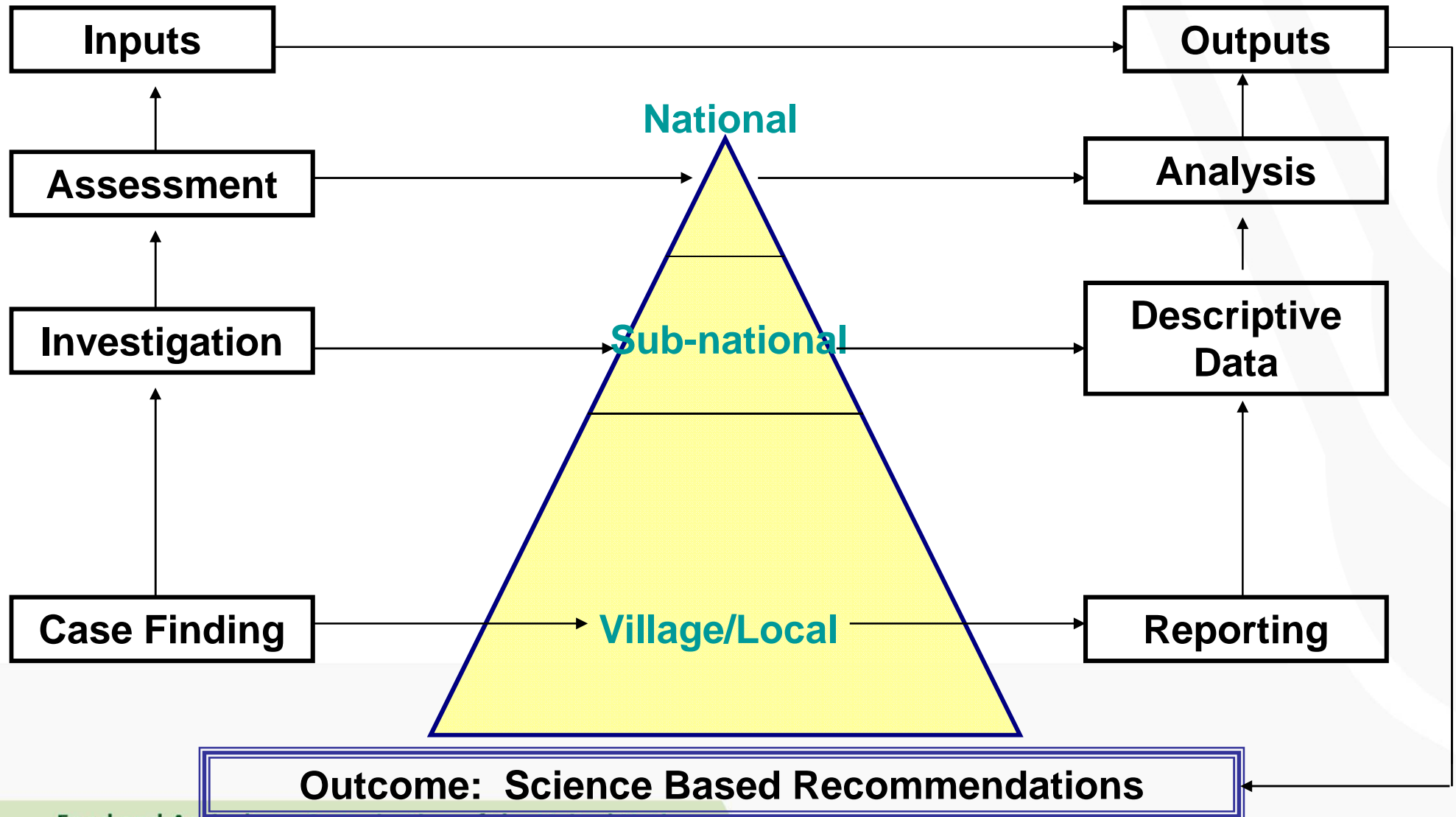


- Epidemiologists expressed a need to be part of a network where training resources are shared
- National and regional epidemiology training strategies should consider the following approaches:
 - Short term
 - Medium term
 - Long term





Flow of Epidemiological Data Within Government Services





Principles of Program and Curriculum Development (Field EPI)

- 6 Core Competencies
- 32 Skill Sets
- >>> Learning Objectives

- ... LINKED TO GOVERNMENT SERVICES
- ... LINKED TO PUBLIC HEALTH TRAINING



TEPHINET

Training Programs in Epidemiology and
Public Health Interventions Network

**ADAPTING A PUBLIC
HEALTH MODEL TO MEET
VETERINARY NEEDS**

II. Regional Needs Assessment for FETPV

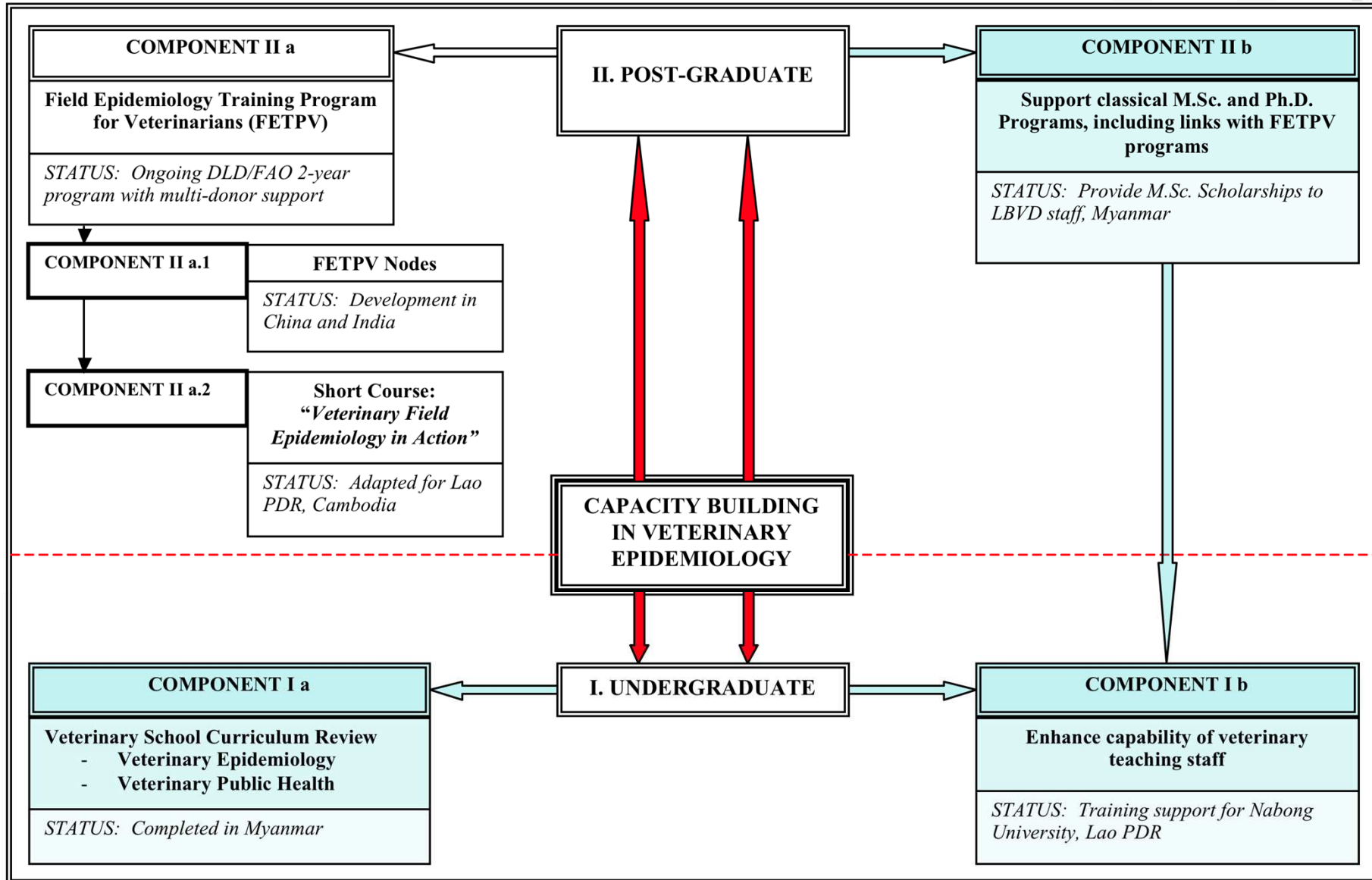


- 10 countries in S, E and SE Asia
- 94 veterinary institutions in 10 countries (Including China and India)
- 13% of reporting veterinary schools provide undergraduate training in epidemiology
- 7% of reporting veterinary schools provide graduate training in epidemiology at MSc or PhD level
- Quality varies and greater emphasis on quantitative skills needed

Skill Gap Analysis	1	2	3	4	5	6	7	8
1. Apply the steps of conducting an outbreak investigation								
2. Participate as an effective member of a team of field epidemiologists								
3. Lead and coordinate a field investigation or a field surveillance activity								
4. Apply computer software to compile field data and describe disease distribution								
5. Apply computer software to analyze field data for trends and risk factors								
6. Collect, submit specimens and interpret laboratory findings								
7. Apply knowledge of laboratory test methods for transboundary animal diseases								
8. Communicate clearly orally in English								
9. Apply basic epidemiological concepts e.g. incidence, prevalence								
10. Apply human relations skills to deal with animal owners and other agencies								
11. Apply recommended biosafety and biosecurity procedures in the field								
12. Apply knowledge of animal health management for important domestic species								
13. Apply national laws and regulations								
14. Design of questionnaires for outbreak investigation and surveys								
15. Analyze field data, assess distribution and risk factors								
16. Design and evaluate various types of surveillance systems								
17. Manage data input, storage, flow, retrieval, analysis and reporting								
18. Evaluate and manage field and laboratory data quality								
19. Analyze field and laboratory data for trends and risk factors								
20. Apply knowledge of market chains to surveillance and outbreak investigation								
21. Apply public relations skills and deal with media								
22. Present scientific data in public to decision makers and the public								
23. Interview and negotiate with animal owners and others concerned								
24. Propose and design a scientific field study								
25. Develop a research hypothesis for a field study								
26. Conduct a scientific literature review								
27. Apply ethical standards to conducting field research								
28. Manage a financial budget and logistics for surveillance or field research								
29. Prepare and submit a manuscript involving field studies for publication								
30. Apply appropriate sampling design to conduct surveys								
31. Perform sample size calculations in order to conduct surveys								
32. Evaluate diagnostic tests								

Gap Analysis of 32 Skill Sets Providing Baseline Country Profile

Building a Coordinated Regional Framework for Veterinary Epidemiology



III. Epidemiology Consortium



- Capacity Building under One Health
- US CDC



IV. Country Self-Assessment (CVO)



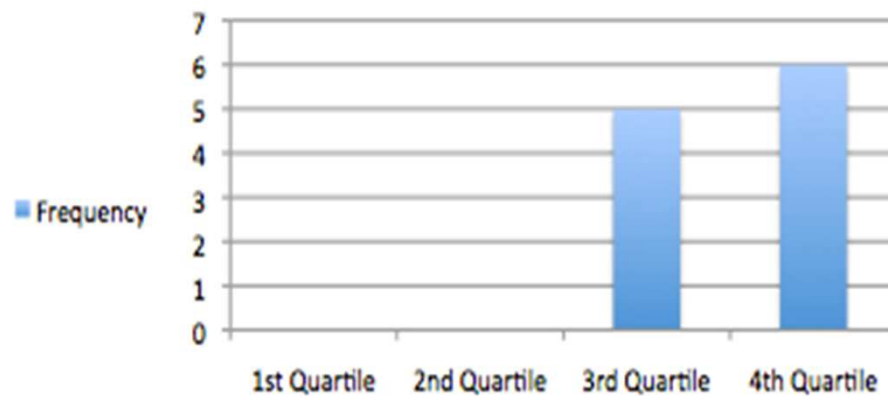
Advocacy

CVO's Meet: Veterinary epidemiology was the focus with eight chief veterinary officers, FAO, OIE and the private sector

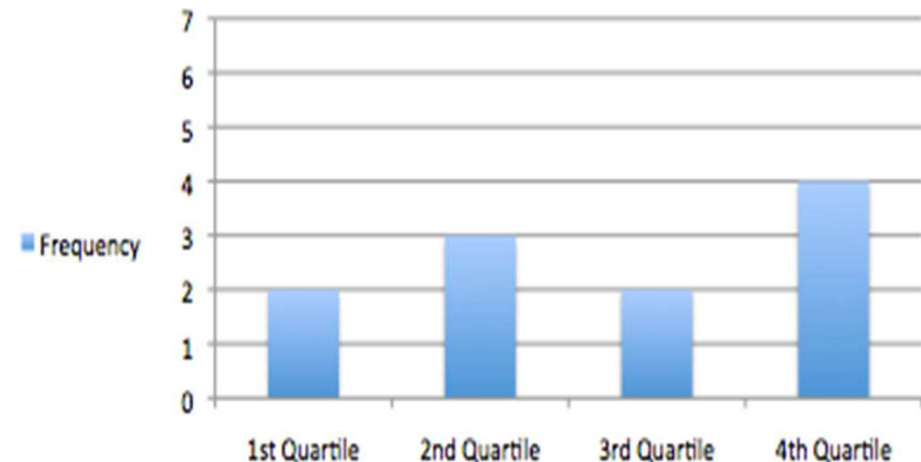
Misaligned Perception of Individual and Institutional Capacities



Distribution of Quartile Scores for Organizational Technical Capacity



Distribution of Quartile Scores for Individual Technical Capacity

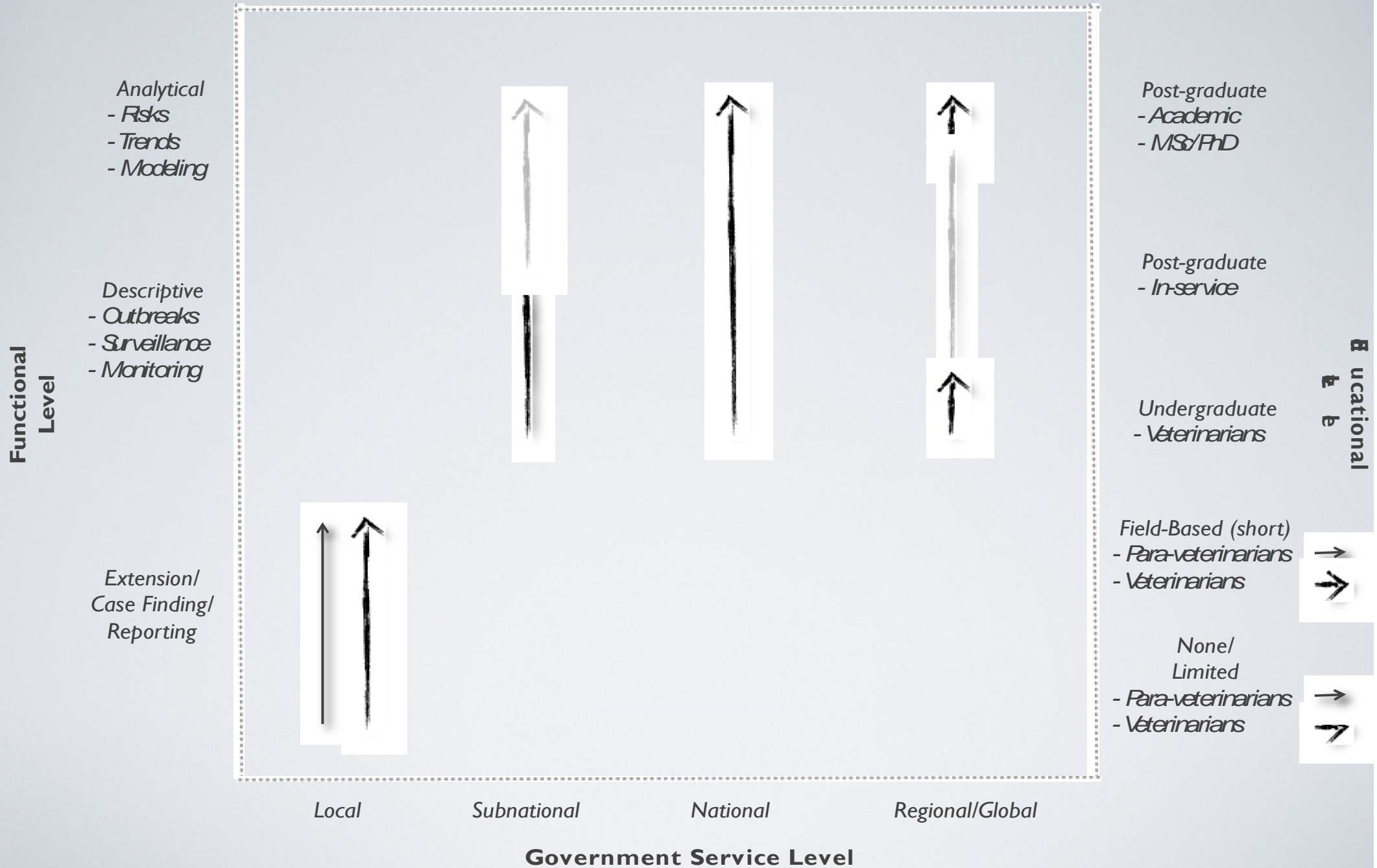




V. The Way Forward: Strategic Plan for Veterinary Epidemiology

- Country and Regional Levels
- Goal: Integrate capacity building & institutional need within One Health
- Follow up advocacy for veterinary epidemiology at national and regional levels
 - Institutional
 - Build/Strengthen Epidemiology Units
 - Individual Trainees
 - Academic Undergraduate
 - Academic post-graduate
 - In-service (Field Epidemiology)
 - Link with paraveterinary training

Interrelationships Among Government, Functional and Educational Levels



Thank You for Your Attention



Grateful acknowledgement to co-authors,
participants and collaborating agencies and
organizations

Questions and Comments Welcome

David.Castellan@fao.org