

# Ensuring Sustainability of Laboratory Services Through Interaction with the Private Sector & Donors

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# Outline

- Background
- IAEA contribution
- Sustainability
- Outcomes
- Future activities

# Background

*We are:*

- Department of Veterinary Public Health & Pharmacology  
Faculty of Veterinary Medicine & Animal Science  
University of Peradeniya  
Sri Lanka

*Mandate:*

- Teaching & Research in Veterinary Public Health, Food Safety & QA, Vet Pharmacology

*Additional activities:*

- National Service Functions

# Why Service Functions in Universities

- Research needs to be applicable at Industries / Field level
- Strengthen Industry Links thereby gain teaching materials
- Overcome financial constraints at academic institutions

## ***Developed Laboratories for***

- Screening Food Commodities for Antimicrobial Residues
- Monitoring Foodborne Pathogens
- Monitoring Antimicrobial Resistance

# Overall Objectives

## *Sustainability through Capacity Building*

- Human Resource Development  
Agency: IAEA
- Infrastructure Development  
Building from State sector: UGC  
Equipment & supplies from granting agencies
- Financial Independency  
Stake holders: State & Private sector

# Initiation of the Process

## **Commenced with a Pre-project Planning Mission with IAEA (2000)**

- Recognized the human resources with leadership
- Technical expertise that can be improved
- Legal frame work of the country
- Identified future stake holders
- National demand for Food Safety & QC service

***Introduced the Ghent University Model***

# Contributions of IAEA

## *Capacity Building*

TCP 2001 – 2002 cycle (SRL/5/035)

CRP 2001 – 2005 (Contract no. 11888)

TCP 2005 – 2006 cycle (SRL/5/039)

CRP 2009 – 2013 (Contract no. 15586)

- Expert Missions (7)
- Scientific Visits (6)
- Fellowship Training (6)
- Short Term Training (4)
- Procurements



# International Atomic Energy Agency

## *Procurements*

- Sent from the Agency
- Permission given to purchase locally where installation & after sales service are required

*(channeled through the UN office in Colombo)*

# Infrastructure Development - 2004

- Building : *State sector / UGC*
- Movable assets : *Lab earnings*
- Equipment & supplies : *grants*
  - International – IAEA
  - Local (supplementary grants)  
NSF, UOP, CARP

# Recognition

- Department of Veterinary Public Health and Pharmacology within the FVMAS
- Inclusion of a new subject “Food Safety & QA” within the BVSc curriculum
- Commencement of MVSc (Veterinary Public Health)
- Postgraduate research degrees (MPhil)
- Qualified Technical Assessors to the SLAB

# Financial Independence & Sustainability

## *By providing screening service*

- Bioassay - Six Plate Method
- CAP - ELISA (test kit)
- HPLC for nitrofurans metabolites

*For commodities including*

Broiler, eggs, beef, pork, shrimp, milk & dairy products

# Service Recipients

- *Private sector*  
Shrimp exporters, poultry processors
- *State sector*  
Ministry of Fisheries QA division, SLSI, Sri Lanka quarantine division, NAQDA

# Scope of Analysis

Test	Sample Type
penicillins, tetracyclines, sulphonamides, aminoglycosides, erythromycin & quinolones Six Plate Method (Bioassay)	Broiler
	Shrimp
	Pork
	Beef
	Fish
chloramphenicol (ELISA Technique)	Shrimp
	Fish
nitrofurantoin metabolites AOZ, AMOZ, AHD & SEM (HPLC-UV Technique)	Shrimp
	Fish

# Quality Assurance



## Certificate of Accreditation

Sri Lanka Accreditation Board for Conformity Assessment  
hereby declares that

**Food Safety and Quality Assurance Laboratory**  
**Department of Veterinary Public Health and Pharmacology**  
**Faculty of Veterinary Medicine and Animal Science**  
**University of Peradeniya**

having being found to comply with the accreditation criteria for testing  
laboratories as described in ISO / IEC 17025 : 2005, has been accredited  
as a testing laboratory under the field of

### Chemical Testing

and has been assigned the accreditation number

**TL 023-01**

This certificate is granted on 16 September 2013 and is valid until

**15 September 2016**

The accreditation was granted for the first time on 16 September 2010

The scope and conditions of accreditation are specified in the Schedule of  
Accreditation bearing the accreditation number appearing in this certificate.

Director / CEO  
Sri Lanka Accreditation Board for Conformity Assessment  
Colombo, Sri Lanka



# APLAC

Asia Pacific Laboratory Accreditation Cooperation

# WHO GFN: External Quality Assurance

DTU Food  
National Food  
Institute



World Health  
Organization



international network

Institut Pasteur



Public Health  
Agency of Canada

Agence de la santé  
publique du Canada

## *Certificate of Participation*

*This is to certify that*

**University of Peradeniya**

**Department of Veterinary Public Health and Pharmacology**

*actively participated in*

**WHO Global Foodborne Infections Network (GFN) External Quality Assurance System 2012**

### ***Performance:***

- ❖ 63 antimicrobial susceptibility tests of 72 were in accordance with the expected\* for 8 test strains of *Salmonella/Shigella*
- ❖ 5 antimicrobial susceptibility tests of 9 were in accordance with the expected for *E. coli* ATCC 25922

\* with reference to methods and breakpoints listed in the WHO GFN EQAS protocol

Prof. Frank M. Aarestrup  
DTU National Food Institute  
Kgs. Lyngby, Denmark

Dr. Amy Cawthorne  
World Health Organization  
Geneva, Switzerland



# Specific Outcomes

- Establishment of three techniques for screening commodities with accreditation based on ISO 17025 (SLAB and APLAC)
- Establishment of a laboratory to monitor foodborne pathogens
- Participating in EQAS performed by WHO Global Foodborne Infections Network

# Overall Outcomes

- Financial Sustainability
- Nation wide service with awareness to industry and public
- Trained trainers for the country (continuous process)

# Obstacles

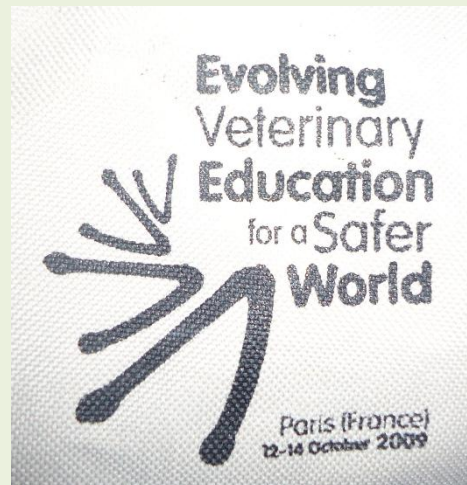
- Movement of academic staff (study leave, sabbatical leave and resignation)
- Unexpected catastrophes (Tsunami)
- Delays in procurements
- Equipment maintenance & service

# Future

- Broaden the laboratory scope to confirmatory analysis of antimicrobials screened by SPM and HPTLC
- Improve the antimicrobial resistance monitoring using molecular techniques
- FSQAL gazetted as an Independent National Laboratory Status for antimicrobial residue monitoring

# Future Contd...

- University system has now committed to commercialize the services (Business Development Center)
- Better prepared to achieve the OIE goal of “Veterinary Education for a Safer World”



University of Peradeniya, Sri Lanka

