FAO FMD Control Initiatives
Outline

• Animal health direction
• FMD Control Initiatives
  o Southeast Asia
  o Other parts of Asia
Animal Health Activities

- Support to national efforts to control selected ‘high impact’ diseases present in their country
- ‘Generic’ enhancement of national disease control systems
- Fostering regional cooperation and the development of regional approaches and coordination capacity for the control of priority transboundary and emerging diseases
- Promotion of Human – Animal Health Sector collaboration
- Information generation and dissemination.
Initiatives in support of SEACFMD Objectives (1)

“FMD Control in Southeast Asia through Application of the Progressive Control Pathway” (GCP/RAS/283/ROK )
(Cambodia, Lao PDR, Vietnam)
Expected outputs

Output 1. Application of PCP-FMD in participating countries is coordinated at national and regional levels

Output 2. Improved understanding of production and market chains of FMD susceptible species as well as animal movement patterns and socio-economic impacts of FMD

Output 3. Improved understanding of FMD epidemiology

Output 4. Strengthened enabling environment for FMD control activities

Output 5. Risk-based FMD control plan developed and implemented

Output 6. Strengthened emergency preparedness for FMD and improved FMD outbreak containment
**PCP Stage 1**

- Understanding FMD epidemiology: FMD occurrence, virus types and virus transmission pathways;
- Risk analyses: defining geographical areas and/or production systems at higher risk;
- The socio-economic impact of FMD in different settings;
- FMD surveillance in the field;
- Improvement of laboratory facilities and capabilities;
- Developing and introducing an information system;
- Developing and introducing effective communication with stakeholders.

**PCP Stage 2**

- Continuation of the activities listed for Stage 1;
- Control of FMD in target areas/zones or farming systems in accordance with the strategy developed in Stage 1;
- In targeted areas/sectors, active (i.e. investigating FMD outbreaks) and passive surveillance;
- Vaccination based on vaccine matching information, respecting the cold chain and followed by post-vaccination monitoring;
- Raising the participation of producers and stakeholders by means of joint programmes, communication and operational funding;
- Raising biosecurity awareness.

**Preparation for Stage 2**
National Project Coordinators Meeting for FMD Control in Southeast Asia through Application of the Progressive Control Pathway (GCP/RAS/283/ROK), Bangkok, Thailand 27-28 November 2014
Objectives

- Review the progress in line with the national project plan and gaps identified at the national consultation workshop of “FMD Control in Southeast Asia through Application of the Progressive Control Pathway”

- Discuss plan of activities and accomplishments, the timelines required to complete activities and plans for consolidation of outcomes;
2015 Work Plan under the ROK Project

- Cambodia, Lao PDR, Vietnam
  - Stakeholder meetings [traders, producers, policy makers]
  - Laboratory Proficiency testing
  - Trainings [sample collection and submission, diagnosis, OIM]
  - Surveillance and reporting
  - Public awareness
  - Procurement of supplies and materials
  - Audit of the cold chain
  - External review of PCP status
  - Regional meeting
  - Closing workshop
Support to Lao PDR

- UTF/LAO/019/LAO TECHNICAL ASSISTANCE FOR THE FURTHER DEVELOPMENT OF THE SPS RELATED LEGAL FRAMEWORK IN THE LAO PEOPLE’S DEMOCRATIC REPUBLIC
  - Law on Livestock and Veterinary Matters (for amendment)
  - Decrees on Animal Movement; Disease Control; Disease Free Areas and Zoning; Border Checkpoints
Initiatives in Southeast Asia (3)

- Support to GF-TADs under LinkTADs
  - Aims to bring together world class research institutes and experts in cross border cooperation with the aim to coordinate research between the EU and China, thus improving scientific excellence in animal health
  - Webinar series: Disease Outbreak Investigation: More than “take sample and run” (Chris Bartels). 9 October 2014
Meeting on Collaboration to Address Transboundary Animal Disease between Lao PDR- PR China-Myanmar, 9-10 December 2014 Vientiane, Lao PDR.

- FMD surveillance
- Promote safe trade for FMD
- Promote safe trade for AI
- Timely information sharing for rapid outbreak response
- Capacity building and sharing of experience
Understanding Risks through Value Chains and Social Network Analysis
Study on Value Chain and Social Network Analysis (Xayabury Province, Lao PDR, 2014)

Value Chain
- 203 cattle and buffalo keeping households were interviewed
  - Mainly kept in a free-ranging system on public land and forests
  - 12% of cattle and buffalo raisers sell animals quickly if they are sick
- 73 out of 103 interviewed pig producers practice traditional production 'penning system.'
- FMD is considered a minor problem by pig keepers & only 1% had used FMD vaccine
- 53 out of 178 interviewed traders used their own network of collectors while the remainder bought the animals directly from the farmers

Social Network Analysis (SNA)
- 189 stakeholders interviewed
  - Logistic regression analysis reveals that 3.7 times more farms experienced both Hemorrhage Septicemia and FMD infections than those farms that experienced FMD only.
  - Nodes with the highest value of indegree centrality were animal collectors who were also involved in livestock raising and slaughtering
  - One giant component in the livestock movement network with 297 nodes was identified

Diagram: A sociogram of FMD-infected nodes (in red color) during 2012 to 2013
Study on Value Chain and Social Network Analysis (3 Provinces, Cambodia, ~April 2015)

Value Chain (Cattle)

- 189 Stakeholders interviewed
- Declining cattle production due to conversion of grazing areas to cash crop plantation & youth migration / urbanization and seeking non-farm income options
- Export driven value chain with increased competition due to increased demand from Vietnamese traders who also buy cattle for fattening

FMD risk factors
- Flooding: Cattle herds are brought to one concentrated area for grazing
- Holding pens for export: Mixing of cattle and returning of ‘left over’ cattle to trader households before next day trading
- Transport & slaughtering of cattle with FMD signs

Social Network Analysis (SNA)

- From the 435 interviewed actors, the study showed that 238 actors (54.71%) experienced FMD in 2013
  - Kampong Cham: Most of the nodes sent their animals out of their premises more received animals as most of respondents were producers.
  - Kampong Speu’s network was similar to Kampong Cham where producers played a role as disease spreaders. Key players: middlemen and related professions such as collectors and traders.
  - The network in Takeo had greater cattle movement out of nodes than movement into nodes
  - The connection in each cluster was closed to random behavior. No cut-point was detected in this network.
Summary

- FMD is **not** perceived as an **important production issue** by farmers.
- Input breed **purchases** of sick animals and **distress sale** of sick animals are common practices -> **socio-economic risk factors**
  - -> Individual **incentives** for collaboration are **not aligned** with potential sector wide gains from FMD control.
- **Focusing control measures** on several important nodes would be **more effective** than a blanket approach.
  - In Lao PDR: Nodes with the **highest** value of indegree centrality were **animal collectors** who were also involved in livestock raising and slaughtering.
- **Nodes** with **high degrees** of centrality – potential hubs for FMD spread - should be targeted for disease **surveillance**.
building a strategic platform for progressively reducing the load of FMD virus in the country with the overall goal of enabling Pakistan to move to PCP-Stage 2

improving food security through an improved on-farm livestock healthcare system
Other Initiatives in the region (2)

- EMPRES Mission: 14-21 March 2014
- FMD Outbreak in pigs and cattle
- Samples sent to FMD RRL Lanzhou, China

TCP/DRK/3405 Emergency Assistance for strengthening FMD control capacity in DPRK

- Training on basic and practical epidemiology [FMD monitoring]
- Principles of biosecurity in farms
  - Animal handling, restraint and collection of samples.
  - Storage and handling of samples and in the use of FMD diagnostic kits.
- Laboratory cooperation with the FMD Regional Reference Laboratory in Lanzhou, China
- Sustainability plan for supplies and basic equipment
Other Initiatives in the region (3)

- TCP/SRL/350  Technical Assistance to improve Foot and Mouth Disease (FMD) vaccine production in Sri Lanka

- CERF 14-RR-FAO-021 :Emergency control of Foot-and-Mouth Disease of livestock in Sri Lanka

- OSRO/AFG/402/JPN  Building resilience and self-reliance of livestock keepers by improving control of Foot and-Mouth Disease (FMD) and other Transboundary Animal Diseases (TADs)
Objective: to discuss the development of guidelines for socio-economic studies required in the FMD PCP

Deliverable: framework on socio-economic FMD PCP guidelines

End product: FMD socio-economic guidelines
Observations

- The Global Programme provides countries a basis to push for their respective FMD control and eradication programmes.
- The PCP provides a structure to control FMD in a manageable way.
- Sharing the burden of control: Importance of country commitments to sustain the control initiatives and build on gains; to maintain FMD free status.
- Collaboration within the country as well as amongst partners.
- Translating scientific information into useful, understandable piece of information that will spur stakeholders to action.
Thank you very much....