FAO RAP Initiatives on Rabies Control and Prevention

7th Regional Steering Committee Meeting of GF-TADs for Asia and the Pacific
Tokyo, Japan, 17-18 July 2013
Outline

- Context
- Rabies as a NZD and Emerging Zoonosis
- Activities
- Conclusions
Emerging Disease Risks

- Three interconnected categories
  - Emerging infectious zoonotic diseases
  - Established zoonoses (endemic or neglected zoonotic diseases) and food borne diseases
  - Emergence of resistance of microorganisms to antimicrobial compounds used in animal production
Disease Burden and Impacts

Elements of the cost of disease

- **Disease risk**
  - financial and social costs arising from publicly and privately funded disease risk mitigation measures (inspection, quarantines, vaccination);
  - Deters investments into livestock production thereby diminishing supply, a cost borne by consumers through higher prices for livestock products.

- **Disease control activities**
  - control costs; disease outbreaks depress economic activity.

- **Actual disease burden** leading to reduced productivity and in some cases shortened life span.
Food and Agriculture Organization of the United Nations

FAO Approach to Zoonotic Diseases

Neglected/endemic Zoonoses

- Echinococcosis/Hydatidosis
- Leptospirosis
- Toxoplasmosis
- Chagas
- Lassa Fever

Emerging zoonoses

- Rabies
- Rift Valley Fever
- Leishmaniasis
- West Nile Fever
- Q-Fever
- Japanese Encephalitis
- Anisakiasis
  - E.coli 0157
  - MRSA
  - BSE/VCJD
  - Hepatitis E
- Brucellosis
- Anthrax
- HPAI
- Nipah/Hendra
- Ebola/Marburg (SARS)
- Monkeypox
- Hanta
- Crimean Congo Hemorragic Fever

Food-borne diseases

- Salmonellosis
- Staph
- Campylobacter
- Listeriosis
- Yersiniosis
- Norovirus

Better Health systems Development
Poverty alleviation
Public awareness

Chain approach
Empowered consumers
Certification systems

Emergency Preparedness
Early detection
Rapid response

Antibiotic residues and antimicrobial resistance
Rabies control initiatives

Better Health systems Development Poverty alleviation Public awareness

Emergency Preparedness Early detection Rapid response

Chain approach Empowered consumers Certification systems

• WRD participation
• Field Support:
  Bali, Indonesia
  Improve rabies dx
• Dog ecology studies:
  Lao PDR, Philippines, Vietnam
World Rabies Day
TCP/INS/3302 - Enhanced Coordination of Control Efforts, Capacity Building, Awareness Raising and Rapid Outbreak Response to Control Rabies in Bali, Indonesia

- An effective program coordination and facilitation mechanism with Government agencies and other national and international partner organizations
- Improved surveillance, response and control mechanisms through appropriate data collection and sound epidemiological analysis
- Advocacy and coordination of rapid and accurate rabies diagnosis implemented
- Improved acceptance of mass vaccination of dogs against rabies, reporting of suspect rabies cases and appropriate response to humans bitten by animals through heightened level of community awareness
- Capacity of animal health staff to better manage rabies control increased
- A revised national rabies control and eradication strategy will be developed
Results

- 2010 – 2013 reduced rabies cases
- No human deaths since August 2012
- Vaccination coverage: 92.13% (2012)
- All districts involved in the programme
- SOPs developed: ICDBM
Lessons Learned

• Stakeholder communication
• Use of quality vaccines with structured comprehensive vaccination plan
• Surveillance and Rapid response teams
• Capacity building (vaccination, dog capture and handling, population control, information management)
• Coherent uniform program in all districts
• Advocacy
Improve the quality of rabies laboratory diagnosis

- Regional training on harmonized lab testing protocol by OIE Reference lab (AAHL)
- Regional Proficiency Testing Program to ensure the quality of lab testing for rabies
- Improve the laboratory biosafety in the region including laboratories carried out rabies diagnosis thru Regional Laboratory Biosafety Program.
Dog Ecology Studies

Main Objective: To determine the interaction of dogs, humans and livestock
Figure 7. Conceptual Framework of the Study
<table>
<thead>
<tr>
<th>Criteria for site selection</th>
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<tbody>
<tr>
<td>• Incidence of rabies in dogs and humans</td>
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<tr>
<td>• Dog population density</td>
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<tr>
<td>• Livestock population density</td>
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<tr>
<td>• Human population density</td>
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<tr>
<td>• Dog bites and human deaths</td>
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<tr>
<td>• Access to veterinary and medical services</td>
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<tr>
<td>• Geographic location</td>
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Survey tool

- Geographic information
- Respondents’ background information,
- Dog-keeping practices,
- Human-livestock dog interaction
- rabies knowledge, attitudes and practices (KAP).
Vietnam Dog Ecology
General Findings

- Dog:human population ratio in Iloilo is 1:2; LPB, Laos 1:3; PhuTho, Vietnam is 2:1
- Owners tend to rear dogs mainly as guards and as pets. Livestock animals are regarded as primary source of food and income by people especially those in the rural areas.
- Dogs have access to other livestock by sharing a common area.
- Vaccination coverage < than 80% or no follow through.
General Findings

- **KAP on Rabies, the disease**
  - Dogs are the only species affected by rabies but unaware that livestock can also be affected with rabies.
  
  - Respondents believe that the species affected by rabies are human and dogs only.
  
  - Respondents have never heard about rabies cases in their areas between 2010 and 2012 and about 21% of them replied that rabies rarely happened in their areas even if the incidence of rabies in Phu Tho is relatively high over last two years (2011-2012).
  
  - Respondents said that they would go for vaccination if they were bitten by dogs. However, very large percentage said that they would not report to local authorities or vets if dogs bite someone indicating that their practices in reporting suspect rabies were very low.
Conclusion

• Need to create simple messages, showing how rabies is prevented, and costs saved for families following simple control measures.

• Rabies control allows both sectors to realize the added value of collaboration hence provides a convincing economic case for support by the two sectors, human health and agriculture (animal health)
Lobbying for support

- Capacity building
- Transparency
- Accountability
- Team Champion

Engage communities
- Raise Awareness
- Implications of NZD
- Studies on direct/indirect cost of NZD (economic impact, disease burden)
- Benefits in investing on NZD control
- Policy briefs (evidenced based)

Government support

Industries affected incentives