Aquatic animal disease situation and emergency response in Vietnam

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(1) Current situation on aquatic animal diseases in Vietnam: important diseases

- White Spot Disease

![Graph showing WSSV areas affected in 2012 (ha)]
(1) Current situation on aquatic animal diseases in Vietnam: important diseases

- White Spot Disease
(1) Current situation on aquatic animal diseases in Vietnam: important diseases

Areas affected by WSSV and AHPNS (ha): 2012
(1) Current situation on aquatic animal diseases in Vietnam: important diseases

Areas affected by WSSV and AHPNS: Jan-Oct 2013
(1) Current situation on aquatic animal diseases in Vietnam: important diseases (cont.)

- **TSV**
  - Affected in *P. vannamei*
  - No outbreak reported
  - Positive cases and mortality found

- **IHHNV**
  - Affected in *P. vannamei*
  - No outbreak reported
  - Positive cases and mortality found
Milky Lobster Disease

- First found in 2007, serious impact in 2012 (cause a loss of 70% production)
- Species affected: Spiny lobsters (*Panulirus ornatus* and *P. homarus*)
- Causative pathogen: Rickettsia-like bacteria
- Area: central coastal provinces of Phu Yen and Khanh Hoa
- Mortality accounted: 80 – 100%
- Still problematic in 2013
Perkinsiosis

- Causative agent: *Perkinsus olseni*
- Host species: hard clam *Meretrix lyrata*
- Susceptible stages: 10-11 months post stocking
- Affected area: 875 ha in 3 provinces
- Mortality: 40-45%
(1) Current situation on aquatic animal diseases in Vietnam: important diseases (cont.)

- Enteric Septicaemia of Vietnamese Catfish
  - Species affected: *P. Edwardsiella angasianodon hypophthalmus*
  - Causative agent: *ictaluri*
  - PHAMAQ vaccine: first commercially
(2) EMS/AHPNS updates

- EMS/AHPNS (acute hepatopancreatic necrosis syndrome) – EMS (early mortality syndrome)
  - Fist occurred in 2010
  - 2011: some areas reported, especially in Soc Trang, Bac Lieu, Ca Mau (70% total shrimp production in Viet Nam), 68% infected area
  - 2012: 29 provinces reported (33% Soc Trang, 36% Bac Lieu provinces)
  - 2013 (ten months): 14 provinces, mortality decreased by 50%. 

(2) EMS/AHPNS updates

Areas affected (ha) by AHPNS: Jan-Oct 2012 & 2013
(2) EMS/AHPNS updates

Epidemiological map: 2012

Epidemiological maps: Jan-Oct 2013
(2) EMS/AHPNS updates

Diagnosis

Hội chứng hoại tử gan tủy cấp tỉnh (AHPNS)

P. vannamei
(2) EMS/AHPNS updates

Diagnosis
(2) EMS/AHPNS updates

Diagnosis

Hội chứng hoại tử gan tụy cấp tính (AHPNS)

AHPNS
Normal
Recommendations for farm practices:

- Reduce density: 60-80 ind./spm
- Feeds and feedings: 85% of normal diet, 4-6 times/day
- Pond bottom treatments: probiotics
- Increase DO
- Water level/depth: 1.5-2.0 m
- Hatchery improvement: luminescent disease control
- Intergated cropping: rest time 1-2 months between crops, fish cultured in shrimp ponds
(3) Emergency responses

Policies and Legislations

1. Veterinary law, 2004;
2. Decree 33/2005/NĐ-CP: Regulations to implement Veterinary law 2004;
3. Decree 40/2009/NĐ-CP: Design on penalty regulations in veterinary;
5. Husbandry seed law, 2004;
7. Circular 52/2011/TT-BNNPNT regulation on prevention and control of shrimp diseases (response to the occurrence of EMS)
(3) Emergency responses

Capacity buildings:

- Annual training courses on AAH management and diagnosis for local key staff
  - 900 participants annually
- Provincial programme: technical supports for disease monitoring
- Quarantine and inspection: imported booders
- Domestic movements of aquactic animal seeds
- Hatchery surveillance programmes
(3) Emergency responses

Stakeholder: Farmers, establishes, hatcheries

- Recording the clinical signs
- Collecting related information
- Sampling

Analyzing of samples (available lab with available PCR protocols, histology); (Sample preservation)

Unknown diseases

DAH

RIAs, Universities

(Sample collection and analyze; or analyze preserved samples from Sub-DAH/sub-D-fish)

Results

Some known diseases (WSSV, YHV, TSV)

Actions: prevention, treatment

Results
Regular disease information/reporting system

OIE/NACA → MARD

DAH

RAHOs

Sub-DAHs

DVSs

AHWs

Farmers

NCVD: National Center for Veterinary Diagnosis
DVS: District Veterinary Services
AHW: Animal Health Workers

Provincial level → District level → Commune level
(4) Constraints

- National regulations and legislations: practical mechanisms and enforcements
- Research, Education and Management: information sharing and cooperations.
- Professionals on aquatic animal health managements:
  - Early warning system: not available
  - Diagnostic system: no PT programmes
  - Farming practices: not updated and appropriate guidances
- Fundings: lacking
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