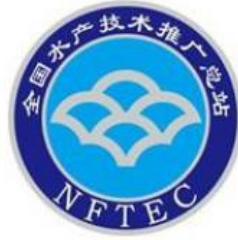




Food and Agriculture  
Organization of the  
United Nations



## FAO/China Intensive Training Course on Tilapia Lake Virus (TiLV)

Sun Yat Sen University, Guangzhou, China

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### Session 6

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# Contingency Planning for TiLVD

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# Contingency plan

- **A forward planning process to respond to an event that is likely to happen**
- **Developed by preparing specific strategies, policies, actions, procedures, and resources**
- **Implemented by government**
- **To prevent, or better respond to, a disease outbreak**
- **A on-going process, subject to evaluation and revisions.**  
**(depends on the development of new technologies, disease status, legislative amendments, etc)**

# Contingency plan goal

- To ensure **preparedness** (not a reaction) for rapid responses to TiLVD outbreaks, it should be developed **before** the occurrence of outbreaks

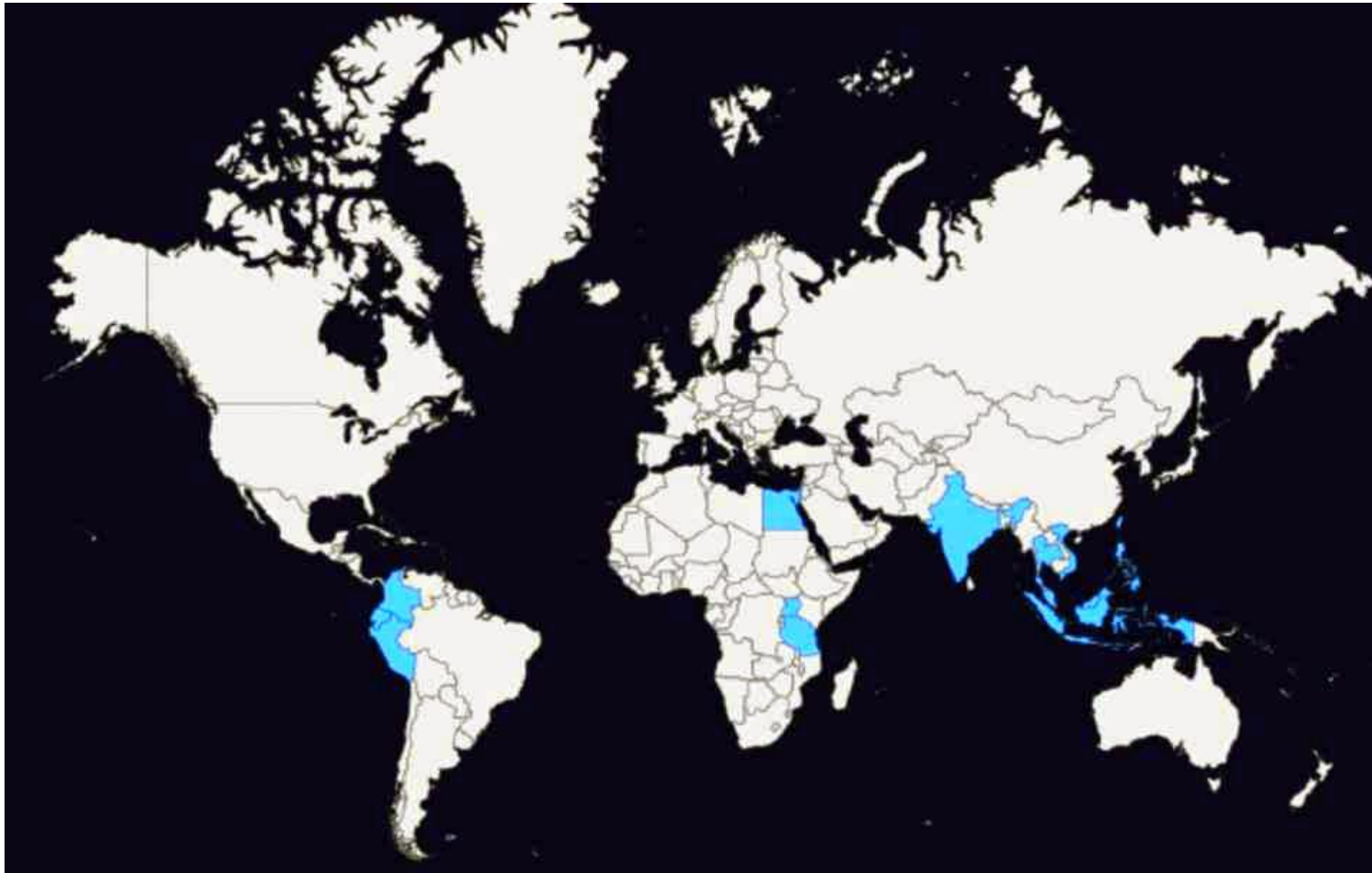
## Objectives

- **Protect tilapia health**
- **Minimize economic losses (fish production and socio-economy)**
- **Minimize negative impacts to the environment.**

# Contingency Plan

- **To consider the worst scenarios (such as the negative impacts on trading) and develop intervention strategies for it**
- **It needs to have a risk assessment analysis that serves as a guide to determine the context**
- **Required elements: TiLVD strategy manual, policies, SOPs, financial and technical resources**
- **Identify gaps and weak areas through simulation exercises**
- **Establishing systems and procedures for TiLVD control**

# Do you need a TiLVD contingency plan?



**Blue: countries reported with TiLVD**

**-14 countries so far in 3 continents: Asia, Africa, South America**

**-Trend:**

**TiLVD is spreading, 11 countries from 2015-2018**

**-Warning:**

**maybe more countries will be affected**

**-Risk assessment: live fish and fish products are traded across the borders**

# **Steps for contingency planning**

- 1. Establish, or review, the government framework that defines response to disease outbreaks based on mandates, policies, strategies, standards, and legal powers;**
- 2. Identify and assess elements of risk (underlying factors, consequences, magnitude, etc.);**
- 3. Identify available and required resources for developing the plan and establish coordination among government agencies and stakeholders;**
- 4. Develop an organization structure that identifies tasks, roles, responsibilities, and required resources;**
- 5. Once the contingency plan is developed, carry out simulation exercises to test effectiveness;**
- 6. Periodically update the plan, usually annually**

# **Components of a contingency plan**

## **Technical plans**

**Disease strategy manuals (one for each high priority disease)**

**General procedures manuals (SOPs)**

**Enterprise manuals**

**Job descriptions (needed skilled, responsibilities)**

## **Support plans**

**Financial (individual farmer, fish farming industry, government)**

**Resource (equipment, diagnostic reagents, vaccine banks, etc)**

**Legislation and other agencies**

## **Operational capability**

**Management manuals (coordination, arrangements)**

**Diagnostic resources**

**Field personnel**

**Training resources**

**Awareness and education**

**Response exercises (simulation)**

**See: <http://www.fao.org/docrep/009/a0090e/A0090E10.htm>**



<http://www.agriculture.gov.au/animal/aquatic/aquavetplan/>



# **OIE Aquatic Code, Chapter 4.5, Article 4.5.5, Components for contingency plan:**

- 1. diagnostic procedures in national reference laboratories;**
- 2. confirmation of diagnosis, if necessary, at an OIE Reference Laboratory;**
- 3. standing instructions to aquatic animal health personnel in the field;**
- 4. instructions for handling/disposal of dead aquatic animals at an aquaculture establishment;**
- 5. instructions for sanitary slaughtering;**
- 6. instructions for disease control at the local level;**
- 7. instructions for the establishment of quarantine areas and surveillance zones;**
- 8. provisions for controlling movements of aquatic animals in established zones;**
- 9. disinfection procedures;**
- 10. fallowing procedures;**
- 11. surveillance methods for establishing successful eradication;**
- 12. re-stocking procedures;**
- 13. compensation issues;**
- 14. reporting procedures;**
- 15. provisions for raising public awareness of aquatic animal disease.**

# **Barriers to contingency planning**

- **Lack of commitment**
- **Neglect early warning**
- **Lack of support from government in policies and actions**
- **Lack of financial support and resources**

# **Simulation exercises**

## **Definition:**

- **An organized event carried out with the aim of:**
  - **Training personnel involved in the control of a disease outbreak**
  - **Testing the adequacy of supplies and resources**
  - **Testing the capability in managing TiLVD**
  - **Testing of a contingency plan at local, regional, national, and/or international level (cooperation between neighboring countries)**

## **Type:**

- **Office-based,**
- **Field-based**

# **An example of simulation exercise**

## **Day 1: office-based**

- 1) Information presentation**
- 2) Review and update contingency plan**

## **Day 2: field-based, in a local control center and farms**

- 1) group 1: outbreak investigation (notification procedure)**
- 2) group 2: surveillance (epidemiology, tracing)**
- 3) group 3: diagnostics (sampling, analyses)**
- 4) group 4: quarantine (zoning and movement restriction)**
- 5) group 5: disposal of dead fish and farm decontamination**
- 6) group 6: biosecurity audit**

# Participants

- **State veterinarians (or CVO), extension officers**
- **Fish farmers**
- **Media personnel (communication, reporting)**
- **Disease control center personnel**
- **Diagnostic technicians**
- **Fish and wildlife agency**
- **Environmental health agency**
- **Import/export officers**

# **Outcomes of simulation**

- Participants have opportunities to operate the disease control center, use contingency plan and other operational manuals.**
- Participants will analyze the changing disease status, and make decisions on practical issues.**
- Participants will become familiar with the disease, its diagnostic procedures, control and eradication protocols, and biosecurity measures in a major outbreak.**
- Participants will be made aware of government regulations regarding disease outbreaks.**

# **Organizing a simulation exercise**

## **Preparatory phase: 3-6 months**

- Initial meetings**
- Establish a supervisory group**
- Obtain funds for exercises**
- Prepare for scenarios**
- Coordinate with participating agencies**

**Compartmentalisation and control of  
aquatic animal diseases-an example of  
IMNV**



# Compartment-OIE definitions

means one or more **aquaculture establishments** under a common **biosecurity management** system containing an aquatic animal population **with a distinct health status** with respect to a **specific diseases** or diseases for which required surveillance and control measures are applied and basic biosecurity conditions are met for the purpose of **international trade**.

Such compartments must be clearly documented by the **Competent Authority**.

# **An example of IMNV-free compartment**

Indonesia shrimp farm, PT Bibit Unggul (Global Gen), which has declared to be IMNV-free in 2013 following the OIE-guideline.

See the link: <https://www.oie.int/doc/ged/D12907.PDF>

**“Self-declaration from the production company PT Bibit Unggul (Global Gen) of freedom from **nine** OIE-listed or regionally important penaeid shrimp (crustacean) pathogens”**

# Self-declaration

The OIE Member Countries have the possibility to self-declare their country or a zone within their territory free from certain OIE-listed diseases other than those diseases for which the OIE has put in place a specific procedure for official recognition of disease status such as African horse sickness (AHS), bovine spongiform encephalopathy (BSE), classical swine fever\*, contagious bovine pleuropneumonia (CBPP), foot and mouth disease (FMD) and peste des petits ruminants\*.

\*Resolution N° 29 adopted in May 2013 at the 81<sup>st</sup> OIE General Session

# Self-declaration regarding the disease status of a country or zone.

- In the case of self-declaration, **the OIE Delegates** are advised to consult the Terrestrial Animal Health Code or the Aquatic Animal Health Code to verify whether specific requirements for self-declaration of freedom from that particular disease are available.



**Nucleus  
Breeding and  
Broodstock  
Multiplication  
Centers**



**Nucleus Breeding Center**



**Broodstock multiplication center**



# Biosecurity and surveillance

- **2007: basic biosecurity protocol**
- **2008: a pathogen-surveillance programme**
  - **Include 9 pathogens: IHHNV, WSSV, YHV, TSV, IMNV, NHP, MBV, HPV, BP**
  - **Twice a year, assuming a pathogen prevalence of 2%.**

In 2010-2012, the facilities were inspected by the Delegate of Indonesia to the OIE, certified as meeting the biosecurity requirements (audited by Dr. Don Lightner) and IMNV was not detected in last 2 years.

# IMNV-free compartment and international trade status

- **PT Bibit Unggul initiated a meeting and discussion between the Competent Authorities of Indonesia and Vietnam.**
- **An agreement between the two countries on health screening, quarantine and health certification requirements for the export of *P. vannamei* shrimp from Indonesia to Vietnam.**
- **The Vietnamese Competent Authorities have officially approved PT Bibit Unggul as a supplier of *P. vannamei* shrimp.**