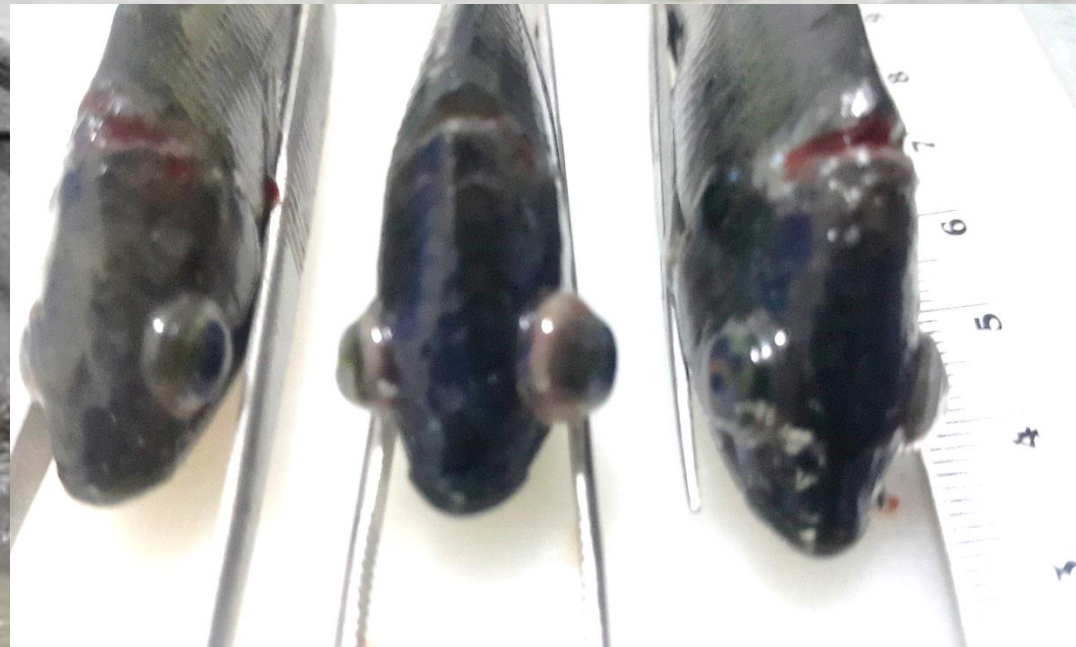


# ELEMENTS OF NATIONAL ACTION PLAN ON TILV IN THE PHILIPPINES

Gonzalo DV. Coloma, Jr

Marco M. Espiritu

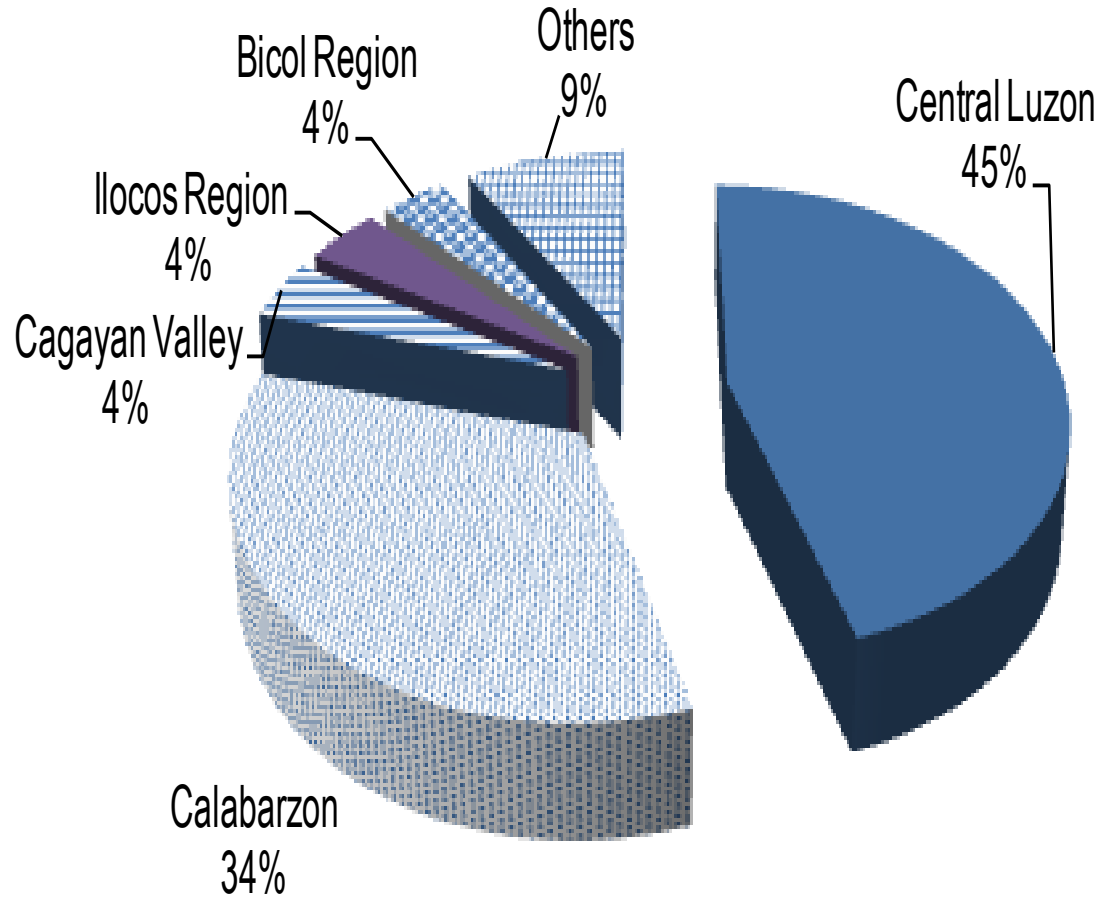
Dan Joseph C. Logronio



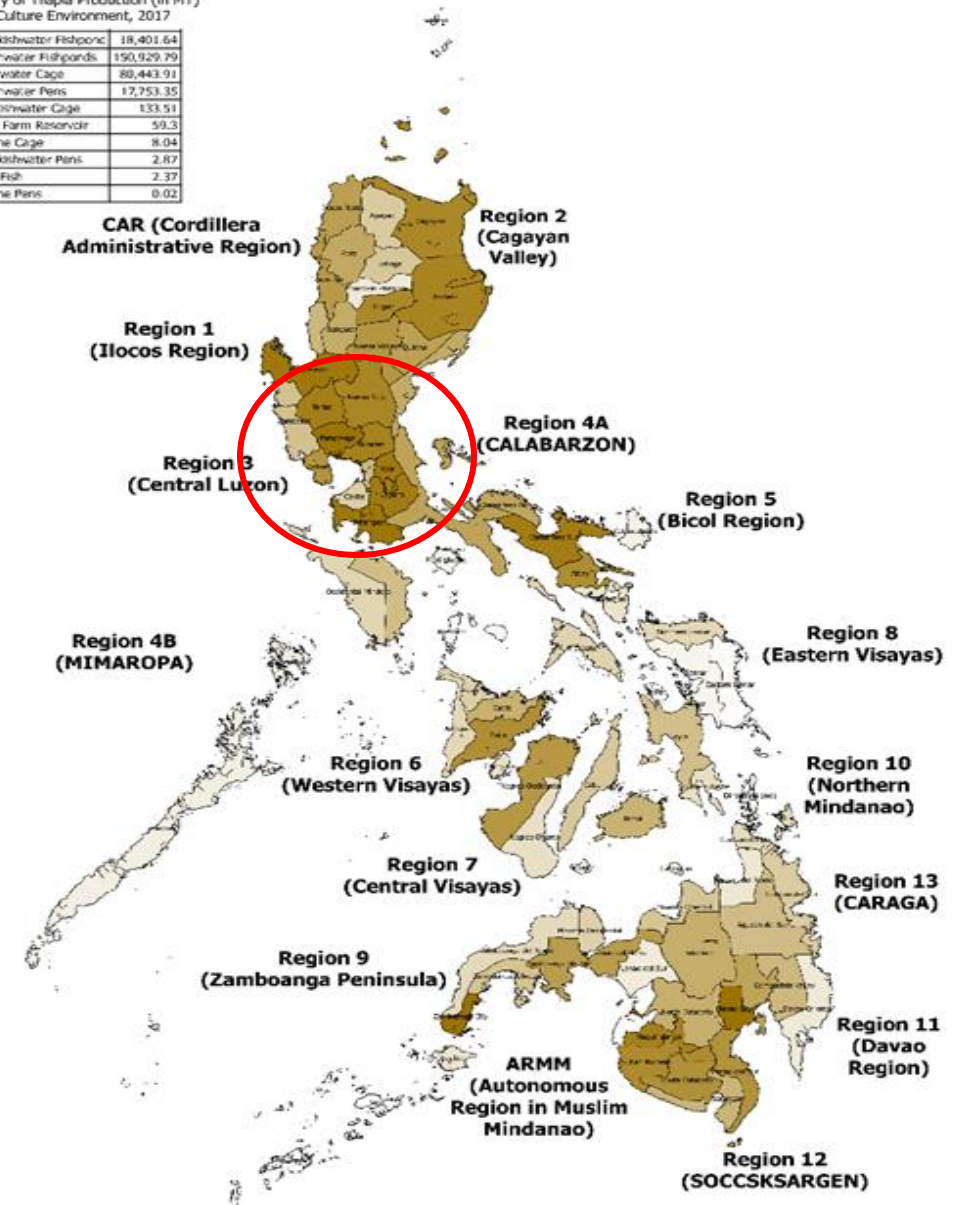
# 1. Farmed and Wild populations of Tilapia: Sectoral status

Summary of Tilapia Production (in MT) by Culture Environment, 2017

Backwater Fishpond	18,401.64
Freshwater Fishponds	150,929.79
Freshwater Cage	89,443.91
Freshwater Pens	17,753.35
Backwater Cage	133.51
Small Farm Reservoir	59.3
Marine Cage	8.04
Backwater Pens	2.87
Rice Fish	2.37
Marine Pens	0.02



Major Tilapia producing regions in the Philippines



## 2. DIAGNOSTICS

### Diagnostic Laboratory and Competence

15 Regional Fisheries Laboratory – 9 Regions with level 3 capabilities

1 National Fisheries Laboratory – Reference laboratory

1 Fisheries Biotech Center under NFRDI

Other Laboratories: SEAFDEC-AQD, Academes

### Diagnostic Laboratories (outside Ph)

Kasetsart University in Thailand

National Taiwan University

National University of Singapore

King Mongkut University in Thailand

### Diagnostic Tests

iiPCR

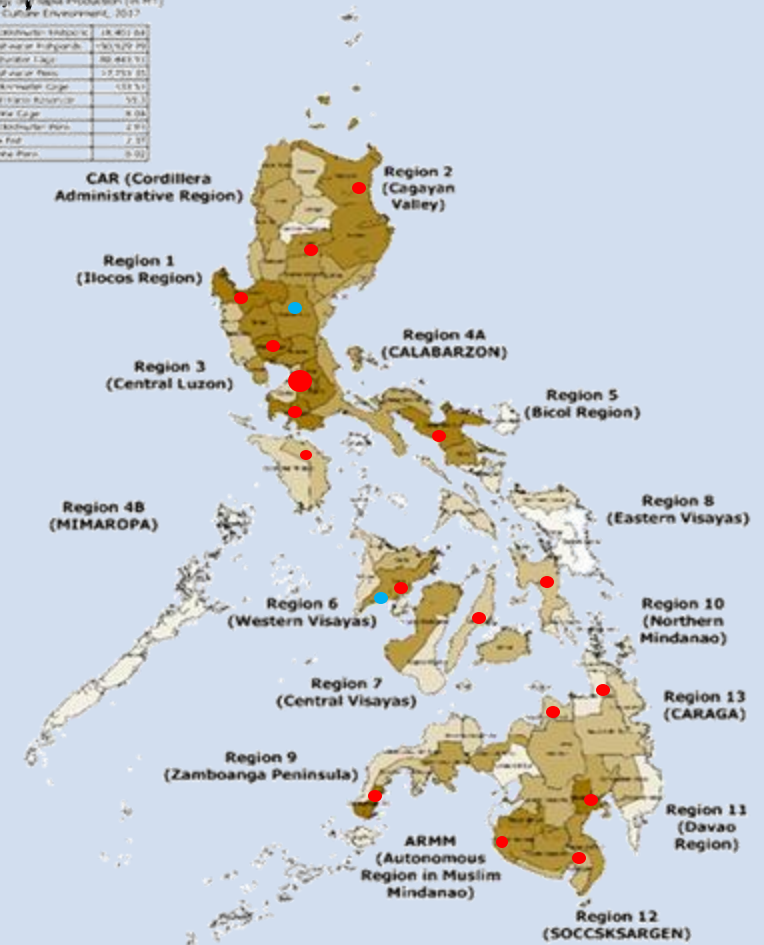
RT qPCR

Histopathology

Cell Culture

Percentage of Aquaculture Production (in MT)  
by Culture Environment, 2017

Culture Environment	Percentage
Brackishwater Shrimp	13.40%
Brackishwater Fish	10.12%
Brackishwater Crustaceans	0.00%
Brackishwater Mollusks	1.00%
Brackishwater Aquaculture	1.00%
Brackishwater Other	1.00%
Small Scale Aquaculture	1.00%
Marine Cage	0.00%
Aquaculture Ponds	2.00%
Sea Pond	2.00%
Marine Ponds	0.00%



# DEFINITION OF POPULATION

Population of interest	Tilapia (e.g. Tilapia, Oreochromis, Sarotherodon)
Targeted population	Wild and farmed
Population for sampling	Wild and farmed
Inclusion criteria	All stages of tilapia
Exclusion criteria	None

### 3. Surveillance: design and implementation

#### 12 point step checklist

#### **OBJECTIVE**

To measure TiLV prevalence at national level in wild and farmed populations

To identify possible risk factors for spreading TiLV in order to develop a disease control program

- To prevent the spread of disease to farmed or wild populations
- To ensure that stakeholders and the public are informed of the issues involved in preventing or spread of TiLV through improper importation or movement of fish products

# CASE / OUTBREAK DEFINITION

## **Suspect TiLV case:**

A fish showing the following clinical signs: mass mortalities, abnormal swimming, exophthalmia, skin lesions, scale loss, lethargy, anorexia.

## **Confirmed case:**

A fish showing the above mentioned clinical signs with positive results from histopathology (e.g. syncytial hepatitis in liver cells) and RT-PCR and/or qRT-PCR

# SAMPLING

- **One stage sampling**
- Cultured fish: Simple random selection of farms will be performed. Seven thousand five hundred forty (7,540) farms will be randomly selected in Region III. One hundred forty nine (149) samples will be collected for each farm.
- Wild fish: 149 samples will be randomly collected for each natural bodies of water (e.g. Angat, Pantabangan dam)
- Sample tissues: Brain, liver, kidney and spleen will be collected from randomly collected fish

## 5. TiLV Outbreak Investigation

TiLV; mixed infection; unknown disease

For each region:

### **Surveillance team**

Trained Provincial Fishery Offices with Pondsides TiLV detection kit

### **Diagnostic team**

Regional Fisheries Laboratory and National Fisheries Laboratory technical for molecular diagnostics and histopathology

### **Field support team**

Organized Tilapia Hatchery and Grow-out Cooperatives



## 6. TiLV Management and Control:

### **Farm level biosecurity**

Mandatory implementation of Philippine National Standard for GAqP

### **Movement of Live Tilapia(domestic and international**

Health Certification for Transboundary movement of live tilapia domestically

### **Quarantine (import/export)**

Ban on the Importation of live tilapia (all stages) regardless of country of origin

## **PHILIPPINE NATIONAL STANDARD**

PNS/BAFS 135:2014  
ICS 65.150

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### **Code of Good Aquaculture Practices (GAqP)**



DEPARTMENT OF  
AGRICULTURE  
PHILIPPINES

#### **BUREAU OF AGRICULTURE AND FISHERIES STANDARDS**

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