

# Response to Aquatic Animal Disease Emergencies

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# Agency that Deals with Aquatic Mass Mortality Events



## **Bureau of Fisheries and Aquatic Resources (BFAR)**

Republic Act 8550 "Philippine Fisheries Code of 1998"

*- mandated BFAR for the protection, management and conservation of fisheries and aquatic resources*

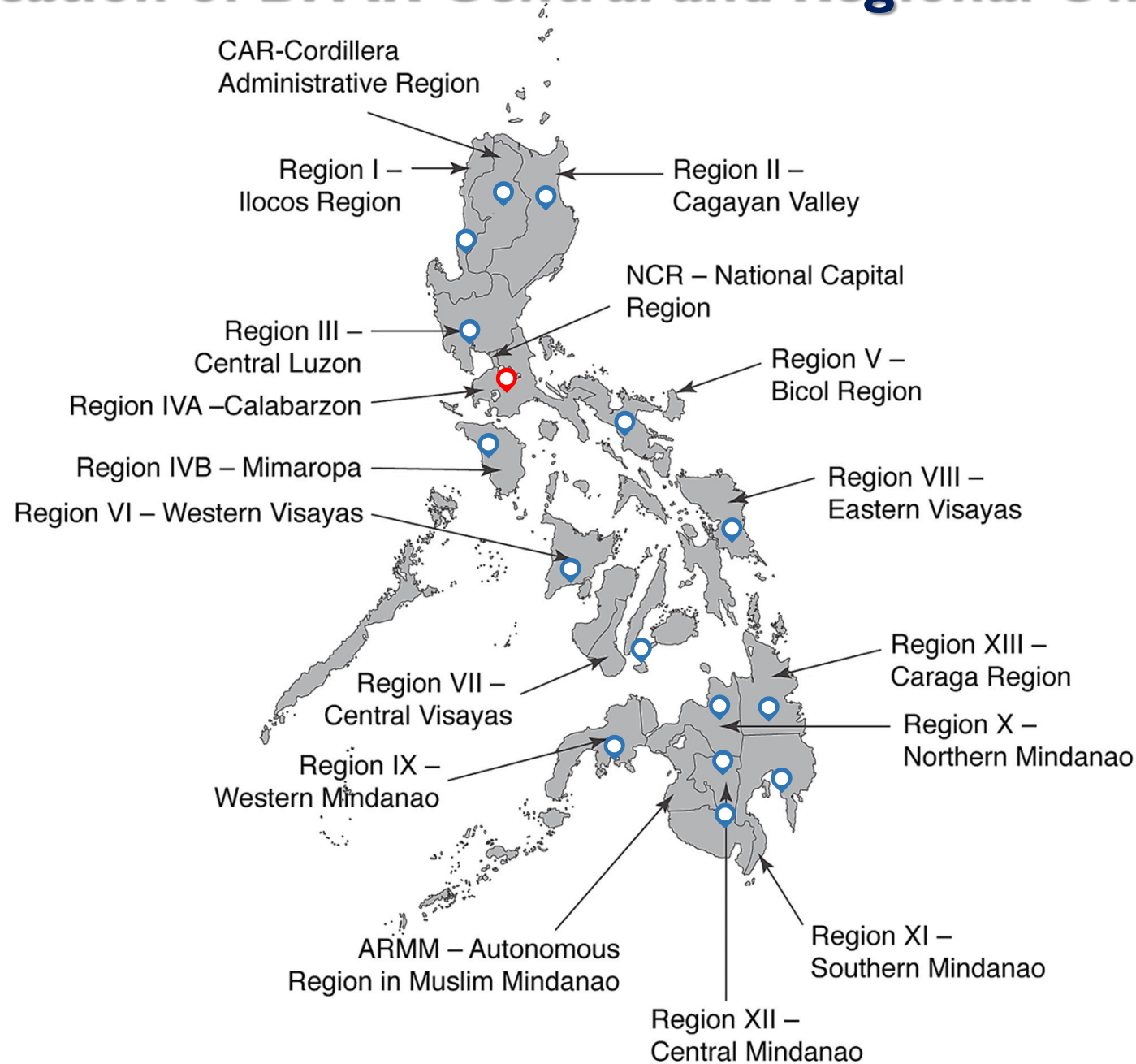
Fish Health Unit, Central Office and Regional Offices (16)

*- act on aquatic mass mortality events (cultured and wild populations)*

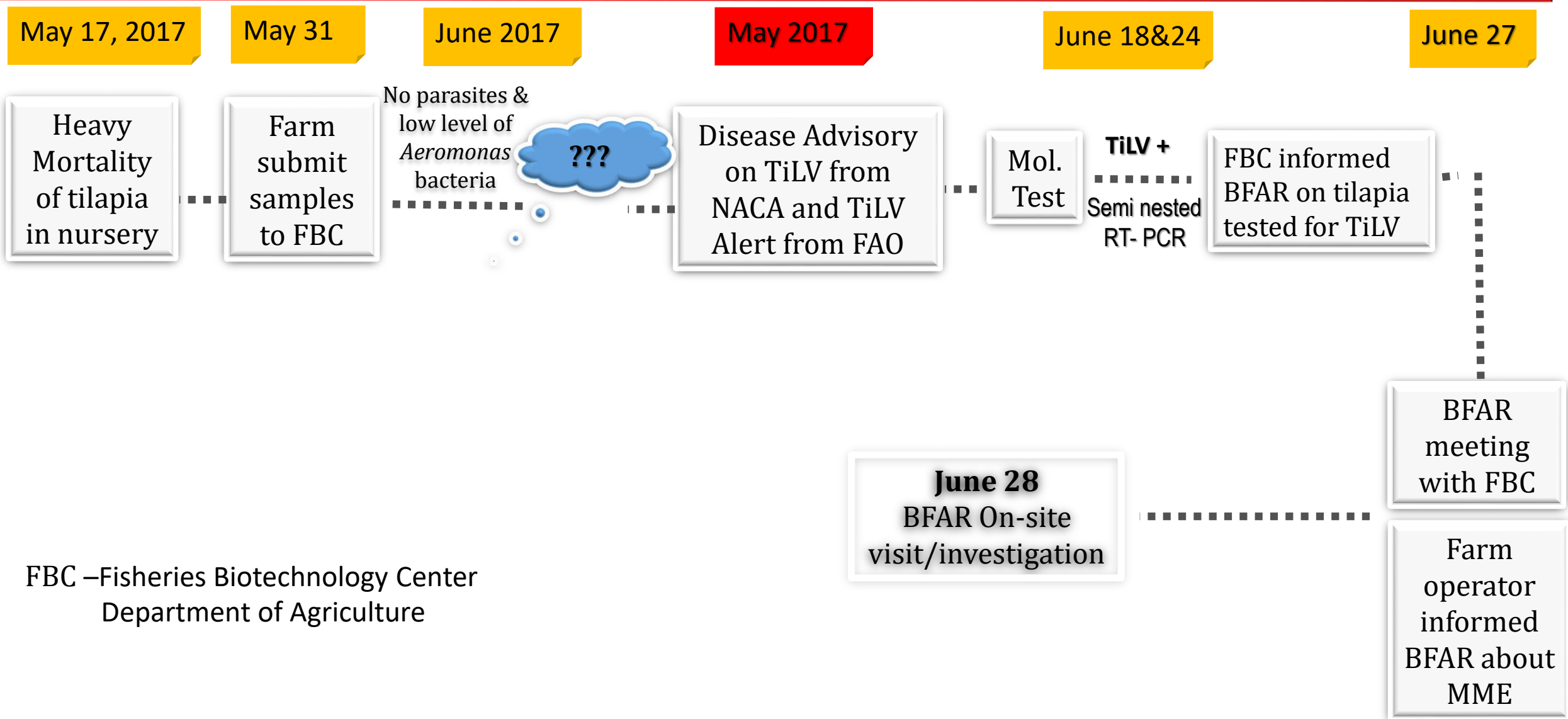
## **Other Agencies**

- Department of Environment and Natural Resources
- Local Government Units

# Location of BFAR Central and Regional Offices



# Mortality Event in Tilapia (May 2017)



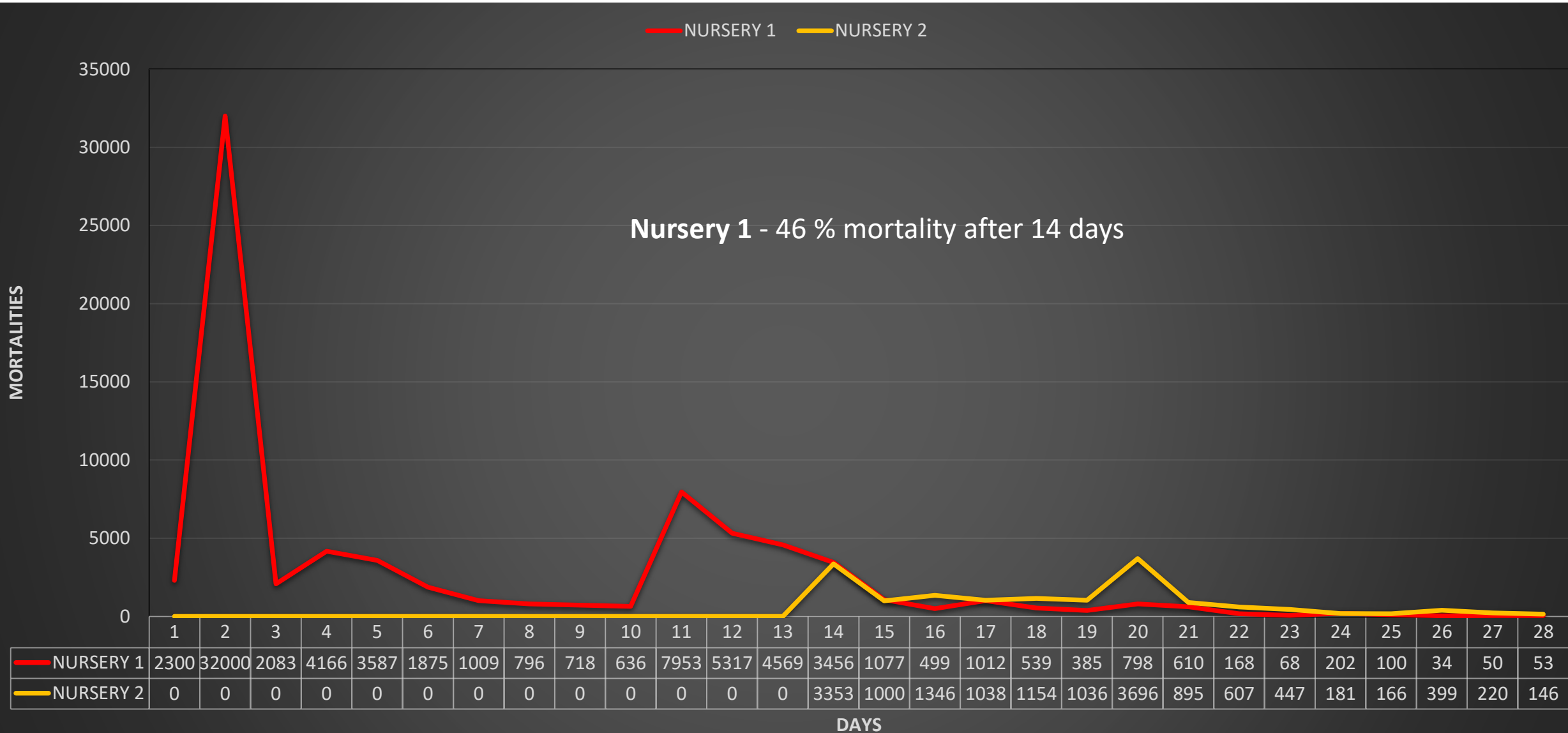
FBC – Fisheries Biotechnology Center  
Department of Agriculture

## **On-site Visit of the Farm by BFAR – June 28, 2017**

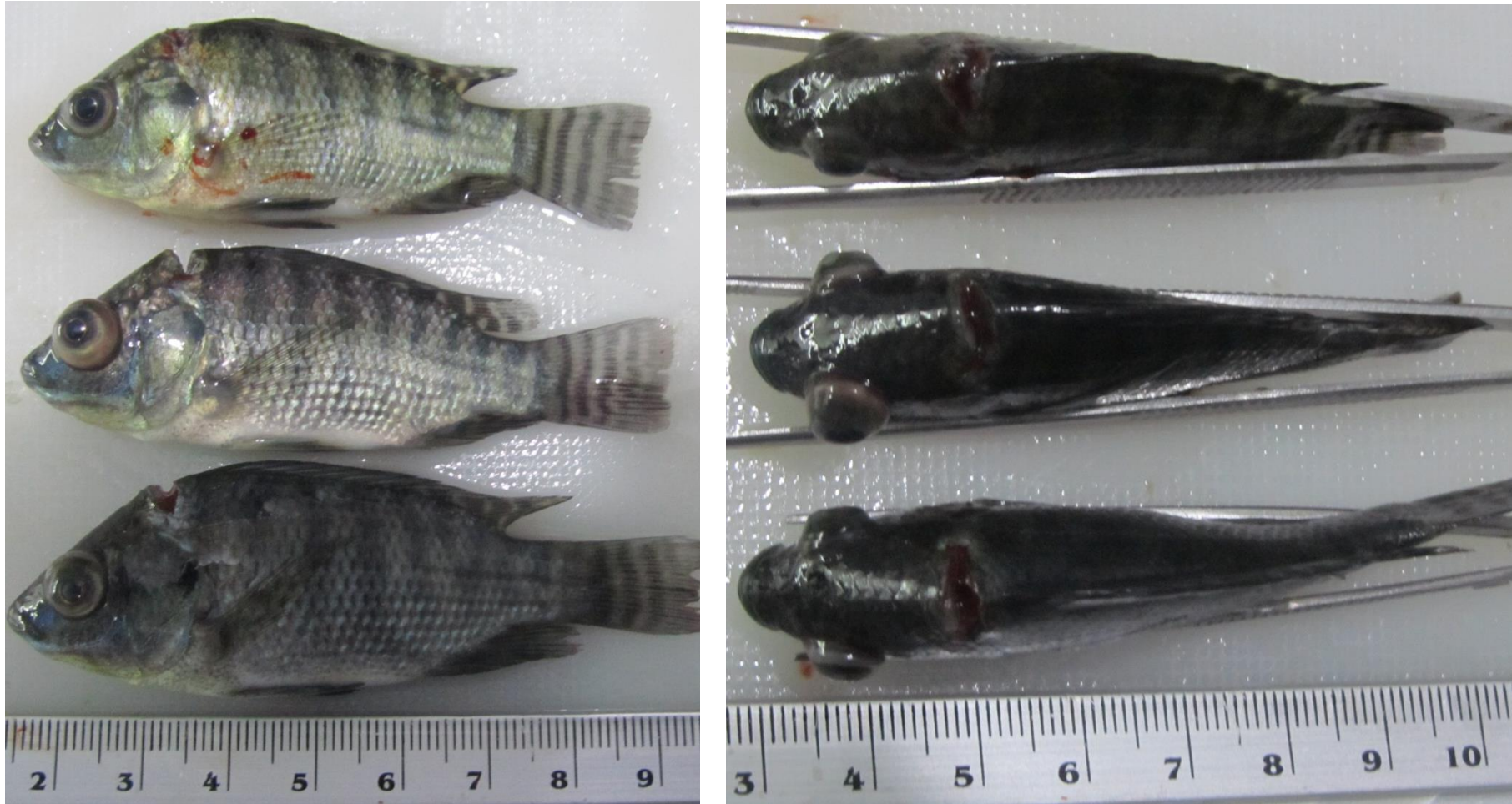


Tilapia in Nursery Compartment

# Tilapia Mortality in Nursery



Tilapia samples collected and examined at BFAR C.O. Fish Health Laboratory  
(June 28, 2017)



Tilapia samples with bulging eyes

Conducted Parasitological, Bacterial Isolation  
Tissue samples collected for Histopathology and PCR Test





# Results

**Parasite** – Gill fluke in low number (microscopic examination)

## **Bacterial Isolation and Identification**

(biochemical tests, API 20E, API 20NE, API Strep)

- *Streptococcus agalactiae* – (liver, kidney, brain)

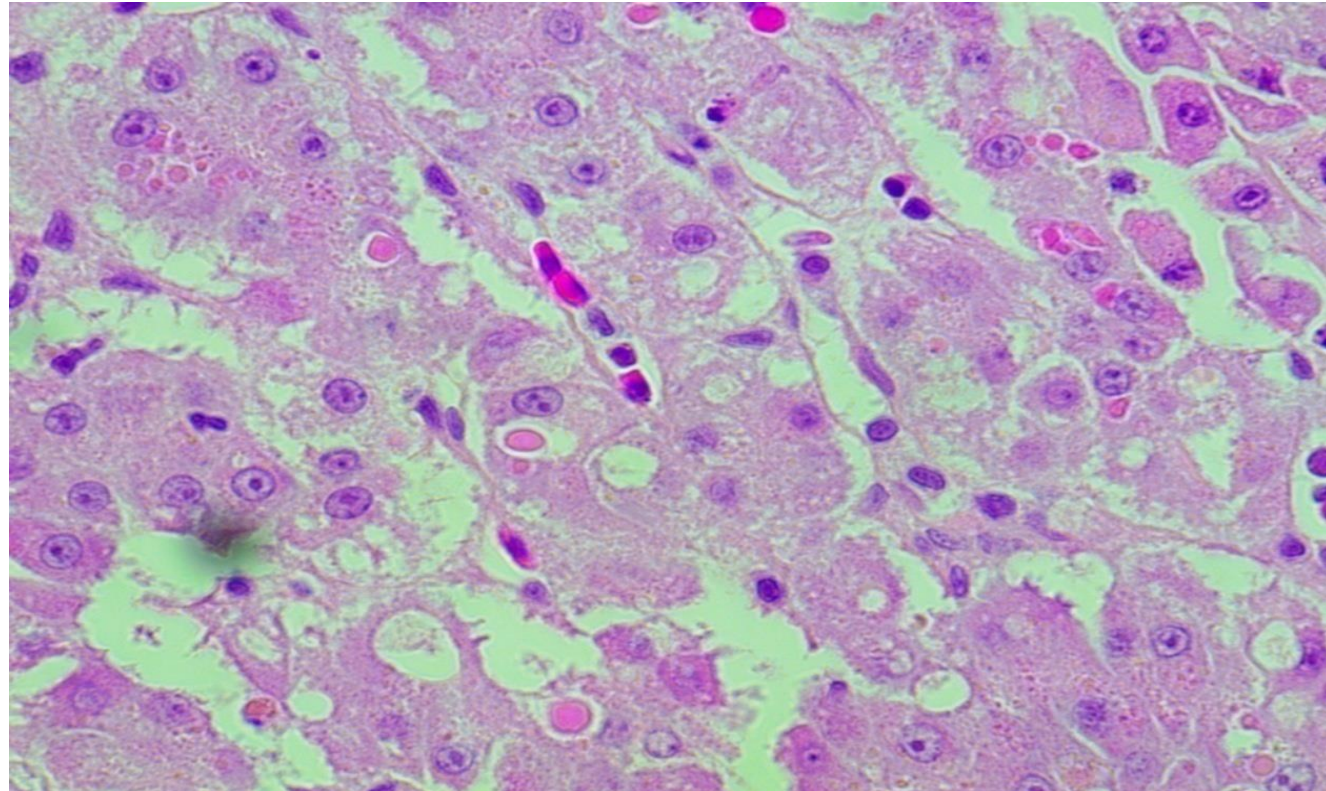
- *Aeromonas sobria* (liver)

**Molecular test** – positive for TiLV by iiPCR and semi-nested RT PCR

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# Results

## Histological Section of tilapia liver (H&E)



Presence of eosinophilic inclusion bodies

# Actions Taken

- Movement of fingerlings from the affected nursery/pond is restricted.
- BFAR monitors the farm and conducted tilapia sampling for TiLV test
- Conducted Training on Laboratory Detection Test (PCR) for TiLV (June 28-30, 2017)
  - participants from BFAR Central and Regional Fish Health Labs and FBC and SEAFDEC
- Conducted on-site visit to other tilapia culture areas and collection of tilapia samples for TiLV test. Based on the tests conducted TiLV was also detected in other tilapia producing areas.
- BFAR issued Memorandum Order for Mandatory Screening for TiLV and issuance of Health Certificate for Transboundary of Live Tilapia for Aquaculture purpose (August 2017).
- Reported to OIE as immediate notification of emerging disease (Nov. 2017)

## **Other Related Activities**

- BFAR and Southeast Asian Fisheries Development Center, SEAFDEC participated in the Intensive training course on TiLV organized by FAO and China Government in Guangzhou, China – June 2018
- BFAR has on-going collaborative study with SEAFDEC on risk factors of TiLV

# Lessons Learned

- Awareness on aquatic animal diseases especially emerging diseases is very important
  - *information dissemination (disease advisory, disease alert), farm level disease recognition*
- Diagnostic capability for emerging aquatic animal diseases should be in place
  - *early detection and immediate action to be undertaken (movement restriction, destruction and other quarantine measures)*
- Cooperation of the tilapia fish operator/owner (build private and public sector partnership)
  - *reporting of mortality events, movement restriction, pond disinfection,*

# Requirements for Emergency Preparedness Response

- **Disease Emergency Protocol**
  - *defined disease emergency response protocol needs to be place, that will serve as guidelines that will identify key agencies, personnel that shall be involved in response actions, step by step procedures to be undertaken from reporting and other actions to be taken (diagnosis treatment, disinfection, destruction/killing and disposal of dead aquatic animals)*
- **Legal basis**
  - *for conducting disease emergency response*
- **Trained personnel (aquaculturist, extension workers)**
  - disease recognition at the farm level (suspected emerging disease)*
- **Diagnostic resources**
  - providing emergency diagnostic services, technical expertise in disease control*
- **Available funds/budget**