



Food and Agriculture
Organization of the
United Nations

FMM/RAS/298: Strengthening capacities, policies and national action plans on
prudent and responsible use of antimicrobials in fisheries Final Workshop
in cooperation with AVA Singapore and INFOFISH
12-14 December, Concorde Hotel, Singapore

Philippines: Development of National Action Plans on AMR: Aquaculture Component, Project Accomplishments and Impacts

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National Action Plan (NAP) for Antimicrobial Resistance (AMR) in Aquaculture Philippines

The Philippine NAP AMR for Aquaculture follows FAO's Action Plan which focuses on four pillars:

- 1. Governance**
- 2. Awareness**
- 3. Evidence**
- 4. Best Practice**



1. Governance

a. General: Status of Country NAP under One Health approach

-General Laws to implement the AMR existing: Republic Act 10611- The Food Safety Act of 2013, Republic Act 10654 An Act To Deter And Eliminate Illegal Unreported and Unregulated Fishing Amending Republic Act 8550

-DOH AS LEAD AGENCY CONDUCTS

Quarterly meeting of Interagency Committee on AMR in 2017

17TH ICAMR MEETING

Agenda

1. Amendment on the PNF AO regarding Restricted Antimicrobials
2. Draft ASEAN Declaration on AMR (DOH)
3. Draft Department Order on the Designation of the Epidemiology Bureau as the National Coordinating Center for AMR Surveillance



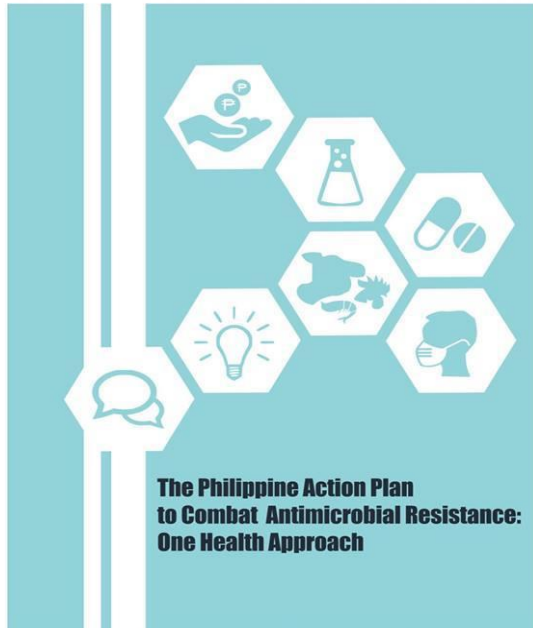
18TH ICAMR MEETING

CODEX DOCUMENTS

PROPOSED DRAFT REVISION OF THE *CODE OF PRACTICE TO MINIMIZE AND CONTAIN ANTIMICROBIAL RESISTANCE* (CAC/RCP 61-2005)(for comments at Step 3 through CL 2017/83-AMR)

PROPOSED DRAFT GUIDELINES FOR THE INTEGRATED [MONITORING AND] SURVEILLANCE OF *FOODBORNE ANTIMICROBIAL RESISTANCE* (for comments at Step 3 through CL 2017/ 82 - AMR)





The Philippine Action Plan to Combat Antimicrobial Resistance: One Health Approach



Philippine Action Plan to Combat AMR: One Health Approach 1

THE PHILIPPINE ACTION PLAN TO COMBAT ANTIMICROBIAL RESISTANCE: ONE HEALTH APPROACH

TABLE OF CONTENTS:

Foreword

List of Abbreviations

CHAPTER 1: The Emergence of Antimicrobial Resistance

- 1.1 The Phenomenon of Drug Resistance
- 1.2 The Global Problem of Antimicrobial Resistance (AMR)
- 1.3 The Health and Economic Burden of AMR
- 1.4 AMR Strategies at the Global and National Levels

CHAPTER 2: The Threat of Antimicrobial Resistance in the Philippines

- 2.1 The Antimicrobial Resistance Surveillance Program 2014 Annual Report
- 2.2 AMR in Animal Health

CHAPTER 3: The Interagency Committee on Antimicrobial Resistance (ICAMR): Roles and Mandate

CHAPTER 4: The Philippine Action Plan to Combat AMR: One Health Approach

Key Strategy 01: Commit to a comprehensive, financed national plan with accountability and civic society engagement

Key Strategy 02: Strengthen surveillance and laboratory capacity

Key Strategy 03: Ensure uninterrupted access to essential medicines of assured quality

Key Strategy 04: Regulate and promote rational use of medicines, including in animal husbandry and ensure proper patient care

Key Strategy 05: Enhance infection prevention and control across all settings

Key Strategy 06: Foster innovations, research, and development

Key Strategy 07: Development of a Risk Communication Plan to combat AMR

References



b. Aquaculture component of the NAP: progress and achievements; plans for 2018

- Continue Survey on the use of drugs**
- Strengthening capability of the laboratory on AMR analysis**
- Strong Policy on AMR**

Implement the BFAR commitment on Philippine National Action Plan



2. Awareness

a. Awareness building

- Conduct of Food Safety Road Show where Policy, Code of Practice like Good Aquaculture Practice and the FAO AMR project are discussed and disseminated to stakeholders for their information and compliance to the requirements.
- Conduct of Congresses to provide awareness on food safety requirements and updates on fish health eg National Tilapia Congress and National Shrimp Congress
- Conduct of Training on Good Aquaculture Practice which includes updates on prudent use of antimicrobials

b. Internal awareness at Competent Authority level

- Conduct of National Planning Workshops of Fish Health Officers which discusses among others the implementation of **FMM/RAS/298: Strengthening capacities, policies and national action plans on prudent and responsible use of antimicrobials in fisheries**
Strengthening Laboratory Capability



DATE	TITLE	SCOPE	NUMBER OF PARTICIPANTS
1) March 1-4, 13-16 & 21-24, 2017	Training Workshops on the Implementation of Philippine GAqP by the EU-TRTA Short Term Expert (STE).	<ul style="list-style-type: none"> • Built capacity to the BFAR production and LGU extension workers in providing technical assistance with the implementation of Phil GAqP 	50
2) May 15-19, 2017	Workshop on the Harmonization of Central and Regional Fisheries Laboratories.	<ul style="list-style-type: none"> • Harmonized operations of the laboratories according to ISO/IEC 17025:2005 laboratory standard 	60
3) June 5-7, 2017	Public Consultation on the Code of GAqP for Seaweeds and Soft Shell Crab (SSC)-Product Standard.	<ul style="list-style-type: none"> • Updated the current status of the aquaculture industry particularly the Seaweeds and Soft Shell Crab • Validated the provisions of the Code of GAqP for Seaweeds and Soft Shell Crab to the Concerned Stakeholders • Gathered recommendations from concerned regions regarding GAqP implementation 	50
4) June 13-15, 2017	Public Consultation on the Code of GAqP for Seaweeds and Mollusks-Product Standard.	<ul style="list-style-type: none"> • Updated the current status of the aquaculture industry particularly the Seaweeds and Mollusks • Validated the provisions of the Code of GAqP for Seaweeds and Mollusks to the Concerned Stakeholders • Gathered recommendations from concerned regions regarding GAqP implementation 	50

DATE	TITLE	SCOPE	NUMBER OF PARTICIPANTS
5) June 19-21, 2017	Public Consultation on the Code of GAqP for Mollusks and and Soft Shell Crab (SSC)-Product Standard.	<ul style="list-style-type: none"> • Updated the current status of the aquaculture industry particularly the Mollusks and Soft Shell Crab • Validated the provisions of the Code of GAqP for Mollusks and and Soft Shell Crab to the Concerned Stakeholders • Gathered recommendations from concerned regions regarding GAqP implementation 	50
6) June 27-30, 2017	Training of the Central and Regional Fish Health Laboratory Analysts on the Detection of the Tilapia Lake Virus (TiLV) and Hepatopancreatic Microsporidiosis (EHP) in Shrimp.	<ul style="list-style-type: none"> • Trained on the detection of tilapia lake virus (TiLV) using PCR and histopathological methods and hepatopancreatic microsporidiosis (EHP) in shrimp using wet mount microscopy 	35
7) September 4-8, 2017	Workshop on the Standardization of the Analytical and Sampling Methods of the Central and Regional Fisheries Laboratories for Fish and Fishery Products.	<ul style="list-style-type: none"> • Developed manual of operations for the laboratory • Prepared standard procedures for laboratory analyses in the regional and central laboratories • Harmonized sampling procedures for concerned central and regional laboratories • Strengthened analytical and sampling methods in ensuring valid quality test results of the central and regional laboratories 	60
8) September 18-22; 25-29, 2017;	Training of the Central and Regional Fish Health Laboratory Analysts on Standard Fry Quality Assessment in Shrimp	<ul style="list-style-type: none"> • Trained the BFAR fish health laboratory analysts on shrimp fry quality criteria including the physical, morphological/ behavioral characterizations through microscopy in conjunction w/ bacteriological and molecular techniques 	50

DATE	TITLE	SCOPE	NUMBER OF PARTICIPANTS
9) October 16-20, 2017	Training of the Fish Health Analysts on Normal Histology of Shrimp	<ul style="list-style-type: none"> Strengthened the capability of BFAR analysts on histopathological examinations of shrimp tissues in discerning normal from abnormal cells. 	15
10) November 6-10, 2017	Training in Histopathological Examination of Shrimp Tissues in Reference to OIE Listed, New and Emerging Significant Diseases	<ul style="list-style-type: none"> To Strengthen the capability of fish health analysts on disease diagnosis using histopathological examination of diseased shrimp tissues particularly finding classic lesions representing every disease caused by specific agents 	15
11) November 20-24, 2017	Year-end review and Planning Workshop of the NFLD Network of Activities	<ul style="list-style-type: none"> To Report the annual accomplishments of fisheries laboratories activities To update and schedule incoming activities for the next year To harmonize the implementation of different laboratory programs and reporting system To come up activities involving BFAR Laboratory and personnel enhancement and proficiencies 	60
12) December 4-8, 2017	BIOTECHNOLOGY 101: Basic Molecular Techniques in the Diagnosis of Diseases in Aquaculture Commodities - to be conducted soon	<ul style="list-style-type: none"> To be familiarized and to understand different techniques, practical skills, and troubleshooting using molecular analysis To extract genomic DNA using high throughput techniques and to detect and identify possible diseases in representative samples from every participating region To discuss concerns and challenges related to the overall scope of the training 	25



**FOOD SAFETY ROAD SHOW :
LUZON, VISAYAS AND MINDANAO INCLUDES CODES OF
PRACTICES AND PRUDENT USE OF ANTIBIOTICS AND
COMPLIANCE TO RESIDUE MRLS**



Participation in the Antibiotic Awareness Week



BUREAU OF FISHERIES AND AQUATIC RESOURCES



11th National Shrimp Congress

NOVEMBER 16-18, 2017, SMX CONVENTION CENTER, BACOLOD CITY



3. Evidence

Survey on antimicrobial use



Methodology

Survey questionnaire by NACA using FAO questionnaire as guide

Section	Information
I. Farm Information	-owner, address, species, farm area, type of operation, stocking density, production and cycle
II. Use of Antimicrobials	-type of antimicrobial & other chemicals and products, mode of application, dosage, purpose, duration of use, withdrawal period, source, veterinary prescription required, disposal, monitoring of residues
III. Disease	-disease problem encountered, production losses, reporting to CA, use of antimicrobials and effectiveness
IV. Market Information	-domestic or export market, middleman or direct to processing plant
V. National Regulation	- awareness of national regulation, adoption of recommended practices on prudent use of antimicrobials, on-farm inspection of government



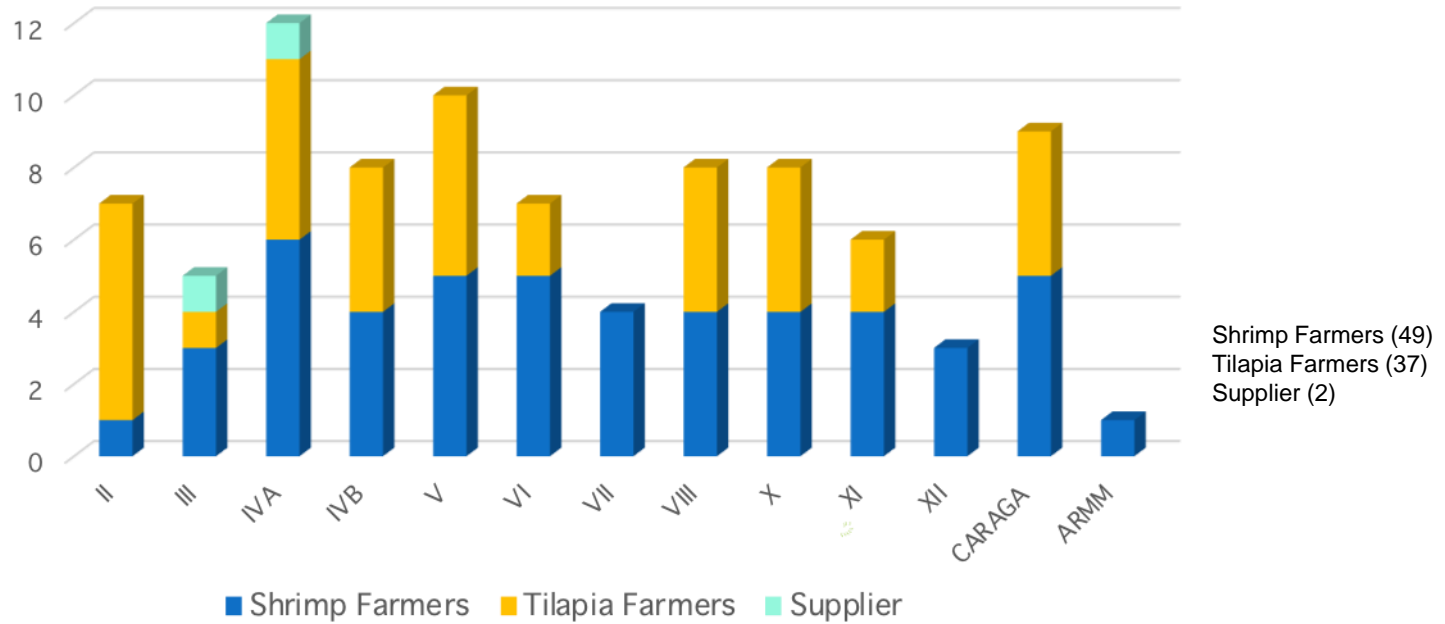
Distribution of Questionnaire

Survey target – tilapia and shrimp farmers, and distributors of aquaculture products

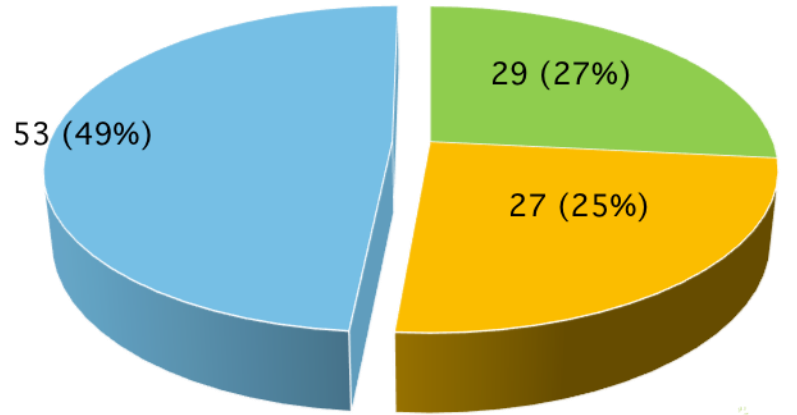
Face-to-face interviews and thru email were conducted by 14 Fish Health Officers in 13 Regions and NCR throughout the country between November and December 2017



I. Respondents



II. Use of Antimicrobials

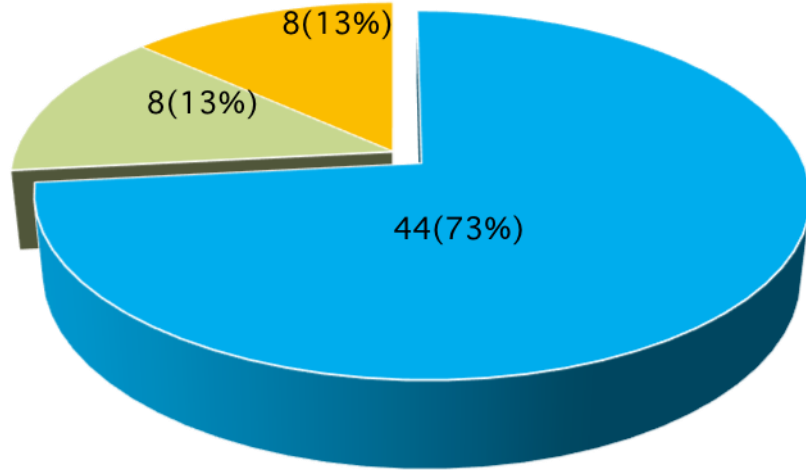


Note:
13 probiotics
3 Disinfectants
1 Antibiotic

■ Using probiotics ■ Chemicals ■ None



Purpose of Use

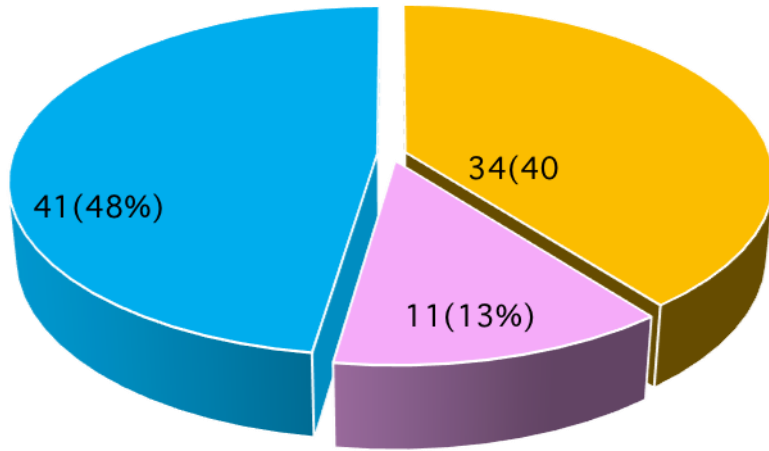


■ Prophylaxis ■ Treatment ■ Growth Enhancement

Source	Local market, 5 suppliers (CP, Biosolution, BAYER, CP, HOCPO)
Prescribe by whom	Supplier, manager, neighboring farmer, consultant
Disposal	Settling pond, drain in canal, garbage



III. Disease Occurrence

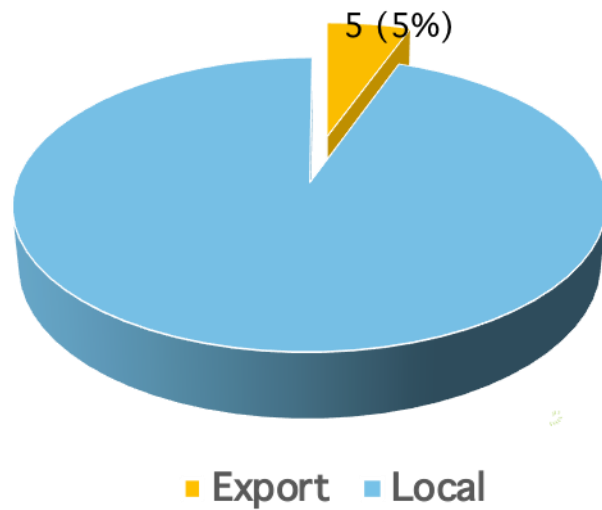


■ Diseases ■ Water Quality ■ None

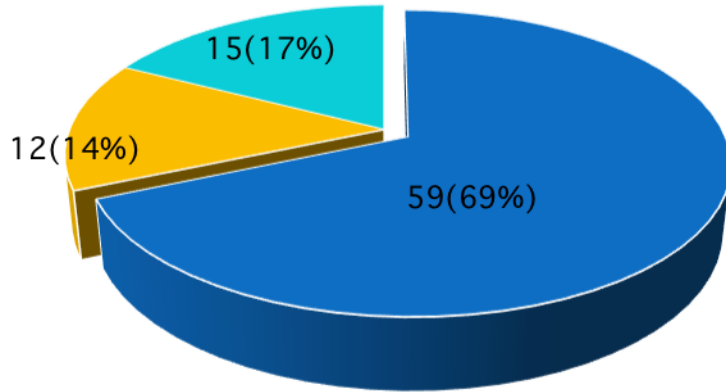
Production losses	50-100%
Reporting Disease Outbreaks	41(47%)
Treatment	Continued, increase dosage (3), emergency harvest
Effectiveness of Tx	10 (21%)



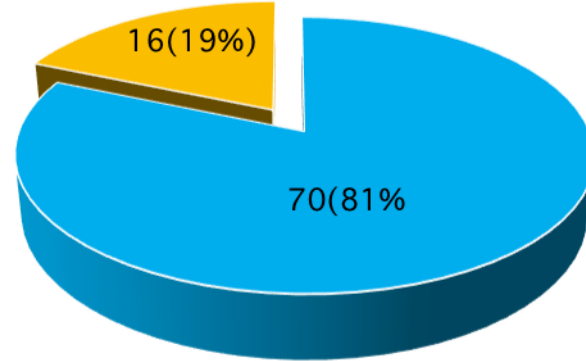
IV. Market Information



V. National Regulation



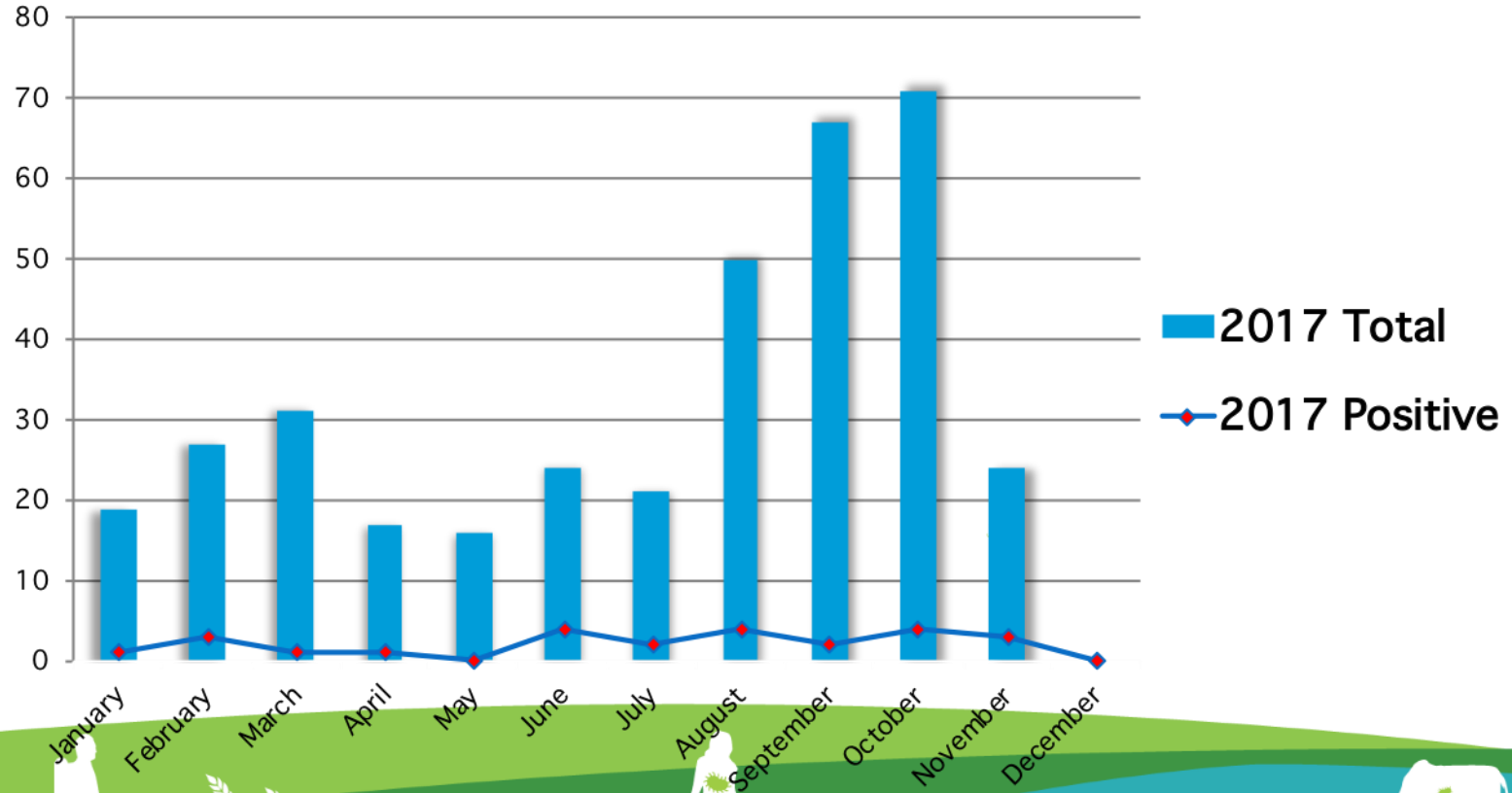
■ Aware ■ No ■ No answer



■ Inspected by the government
■ Not inspected by the Government

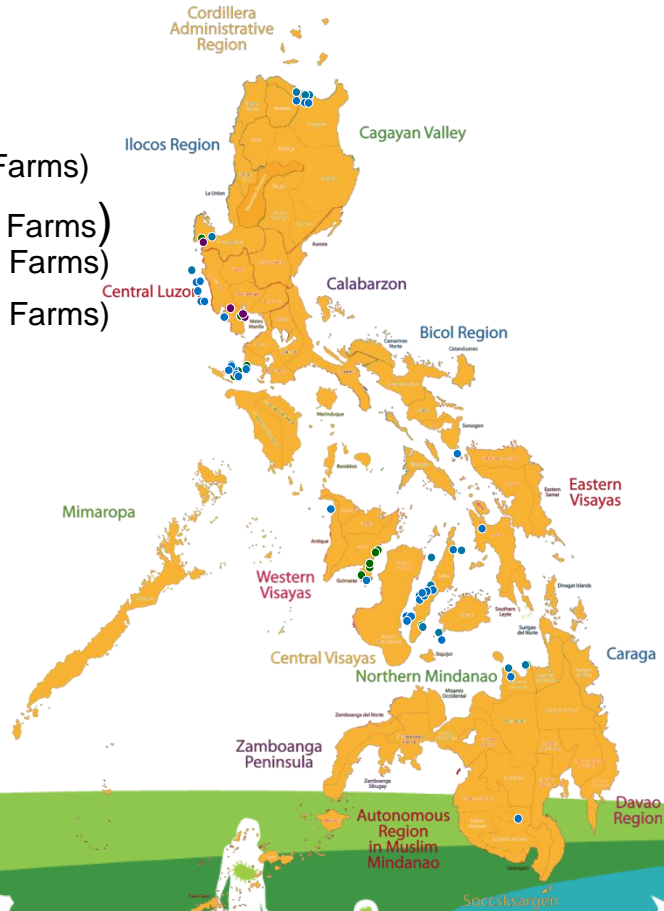


Surveillance on AHPND (2017)



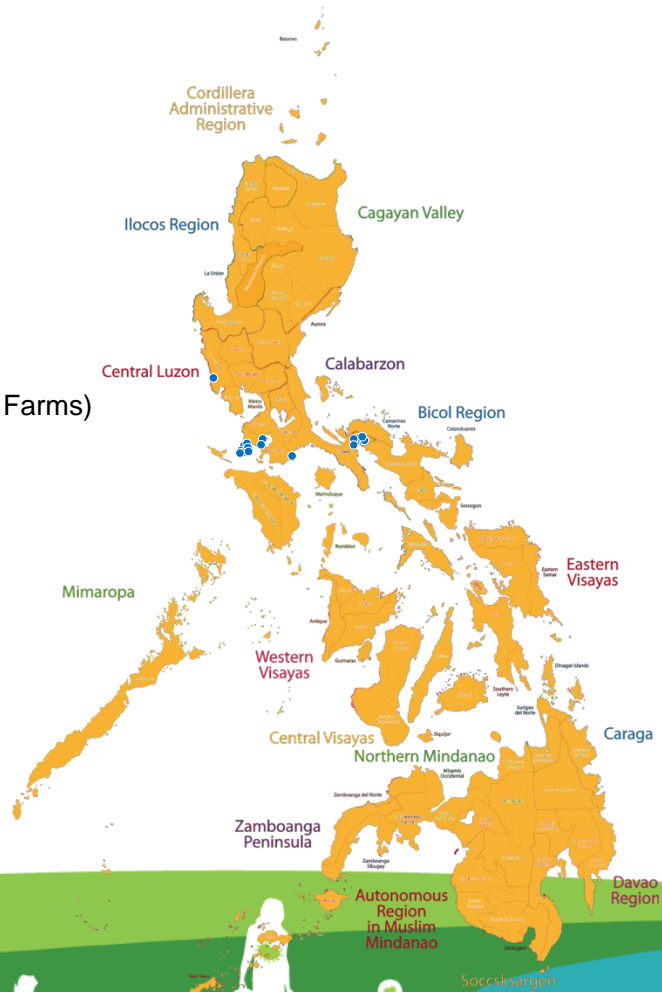
ACUTE HEPATOPANCREATIC NECROSIS DISEASE (AHPND)

- 2014 (4 Farms)
- 2015 (13 Farms)
- 2016 (29 Farms)
- 2017 (15 Farms)



V. harveyi

● 2017 (18 Farms)

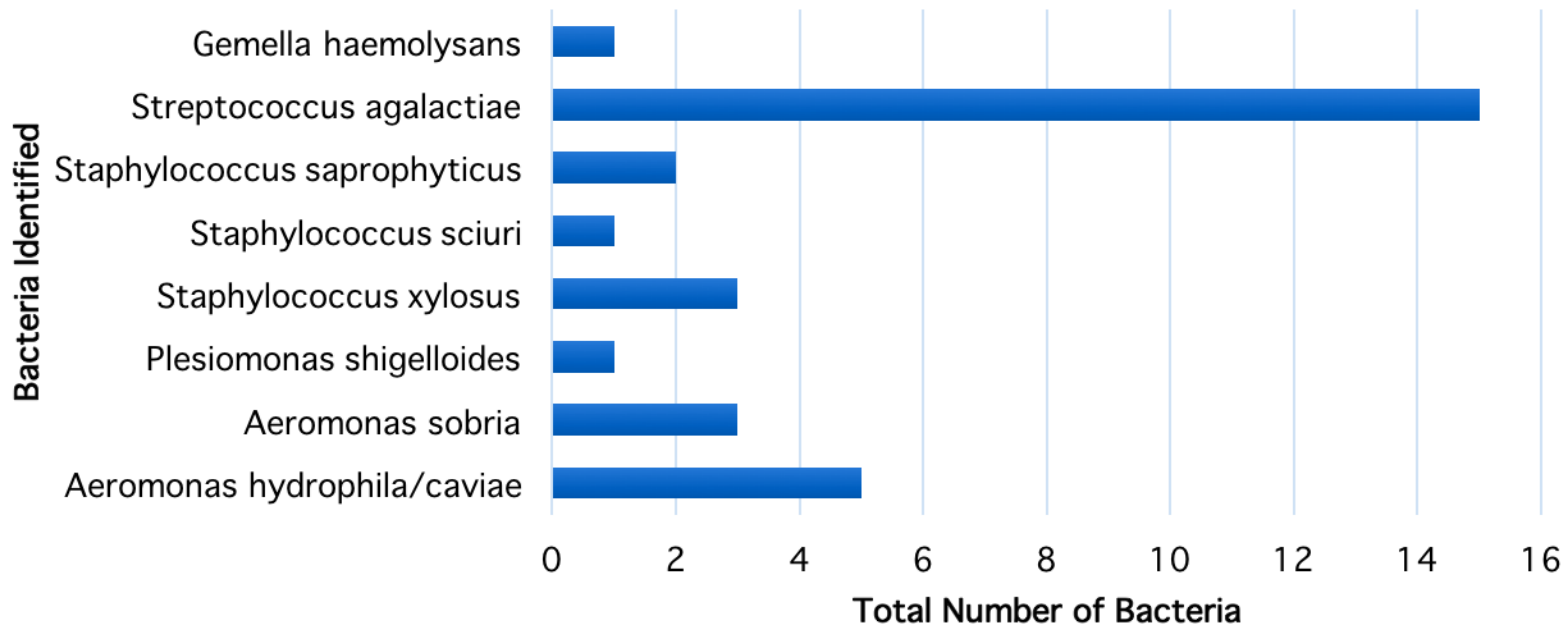


Tilapia Samples for Year 2016-2017

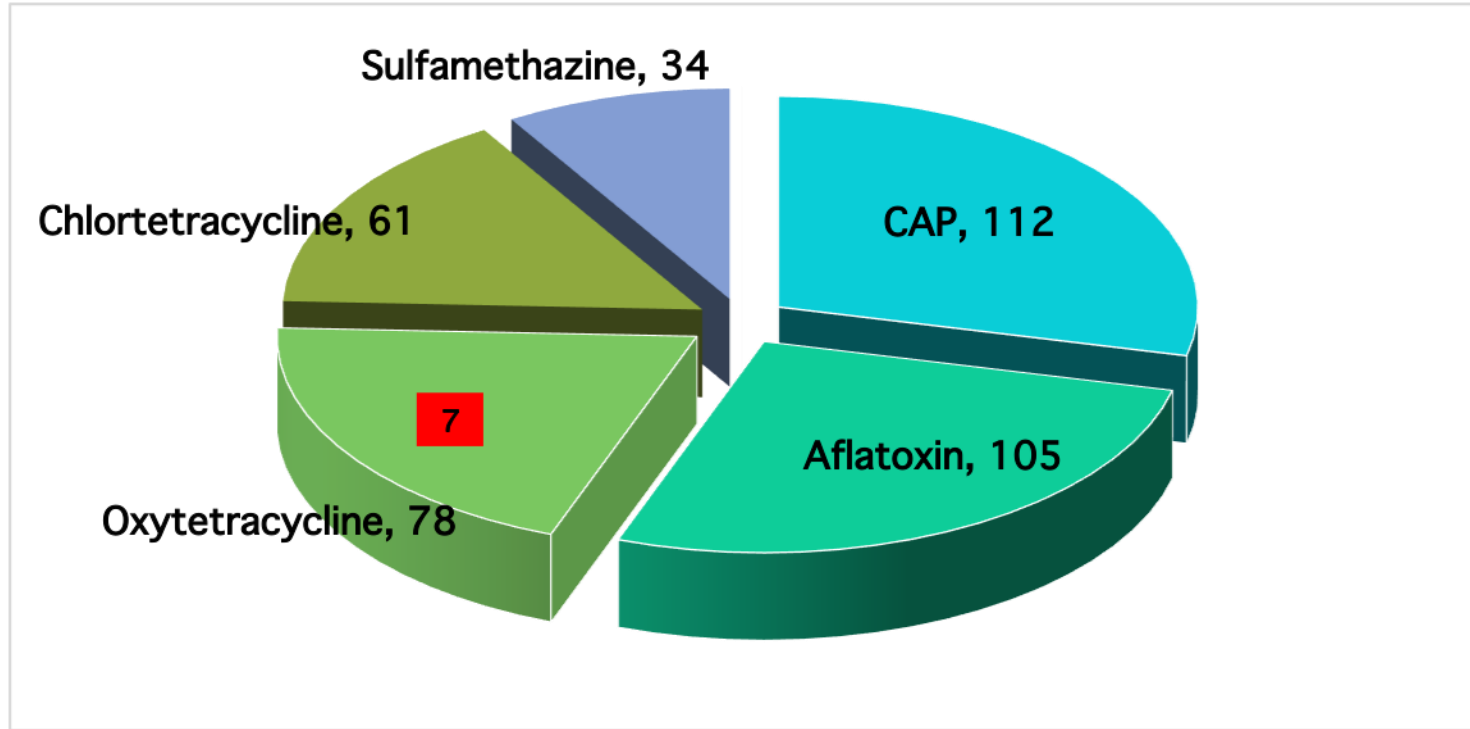
Source	Number of Bacteria Identified	Number of Sample Identified as Streptococcus agalactiae
Taal Lake, Batangas	29	15
Nueva Ecija	4	3
Bulacan	22	15
Total	55	33



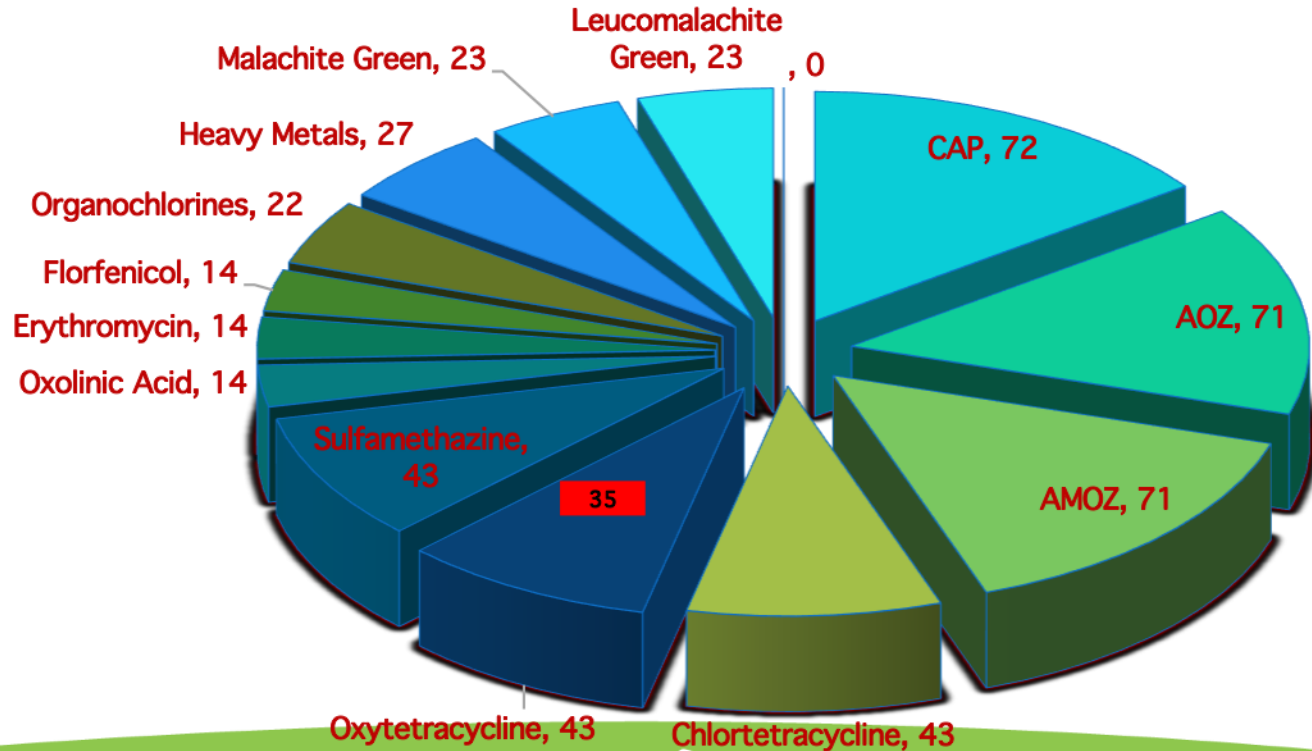
BACTERIA IDENTIFIED IN BALAKILONG, TAAL BATANGAS, 2016



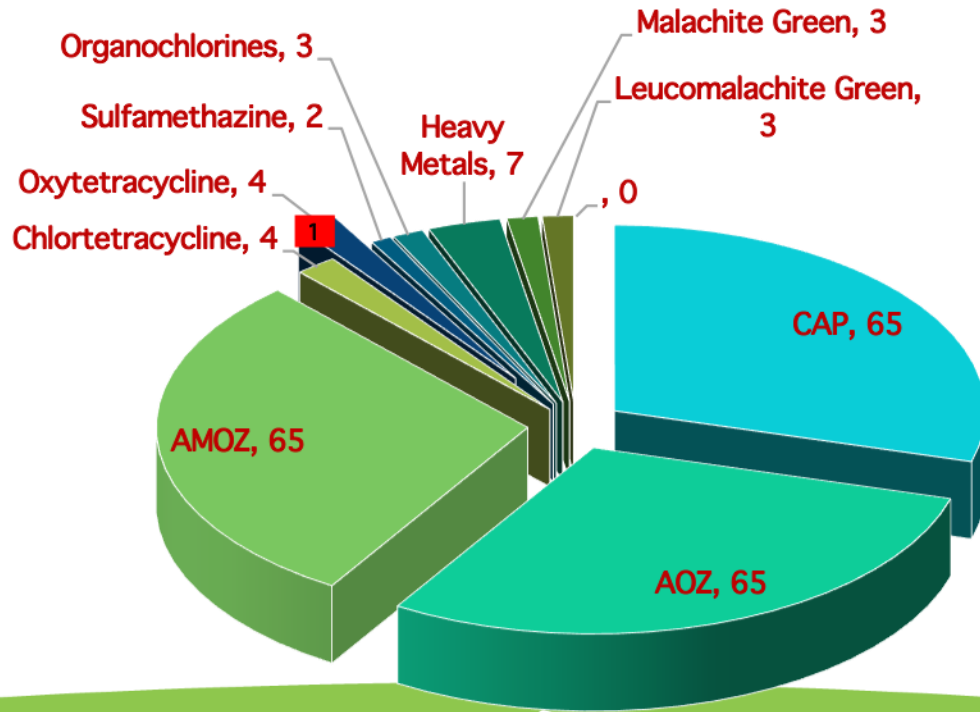
Feeds Samples Analyzed 2017



Residue Monitoring in Shrimp 2017



Residue Monitoring in Tilapia 2017



**PHILIPPINE NATIONAL
STANDARD**

PNS/BAFS 196:2017
ICS 65.150

**Code of Good Aquaculture Practices (GAqP)
for Milkfish and Tilapia**



BUREAU OF AGRICULTURE AND FISHERIES STANDARDS

BFI Compound Viaya Avenue, Diliman, Quezon City 1101 Philippines
Phone: (632) 920-6131; (632) 455-2856; (632) 467-9039; Telefax: (632) 455-2858
E-mail: bafpda@bafsa.gov.ph
Website: www.bafsa.gov.ph

**PHILIPPINE NATIONAL
STANDARD**

PNS/BAFS 197:2017
ICS 65.150

**Code of Good Aquaculture Practices (GAqP)
for Shrimp and Crab**



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Website: www.bafsa.gov.ph

4. Best practice





Training of PFO and LGUs on the Philippine Good Aquaculture Practice (PhilGAqP), its Monitoring and Auditing Procedures





Visayas Cluster

- Cebu City
- 31 participants
- Farm Audit



Mindanao Cluster

- Davao City
- 30 participants
- Farm Audit



Luzon Cluster

- Ortigas, Metro Manila
- 28 participants
- Farm Audit



Areas for further improvement: Clear policy and strict implementation

-- Avoid the dispensing of additives/supplements with unknown formulation "probiotics"	Agrivets; with prescription
-- Documentation of drugs used in the farms	Farm Operators
-- Registration of drugs for aquaculture use	DOH (registration); BFAR (monitoring)
-- Strict biosecurity and hygiene	Farm Operators
-- Continuing research and development	Industry/ BFAR/ Academe



-- Strict implementation of hatchery registration to include other species; include in legislation	BFAR
-- include monitoring of non-pelleted feeds (ex. Trash fish, offal)	BFAR
-- traceability of raw materials of finished feeds (monitored)	BFAR

Recommendation

Strengthening Capability of BFAR laboratory on AMR analysis-CLSI standard and ISO accreditation

Harmonized guidelines on the epidemiological survey of significant diseases and AMR



Thank You

