PVS Pathway

OIE Tool for the Evaluation of Performance of Aquatic Animal Health Services

Aquatic PVS Evaluation Report

Philippines

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Dr Geoff Grossel
Dr Gillian Mylrea

Human, Physical and Financial Resources

Technical Authority and Capability

Interaction with Interested Parties

Access to Markets

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OIE

OIE AQUATIC PVS EVALUATION REPORT OF THE AQUATIC ANIMAL HEALTH SERVICES OF THE PHILIPPINES

03 – 18 FEBRUARY 2013

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List of acronyms, abbreviations and/or special terms

AAD	Aquatic animal disease
AAFVDAPCO	Aquatic Animal Feeds, Veterinary Drugs and Products Control Officers
AAH	Aquatic Animal Health
AAHS	Aquatic Animal Health Services
ARMM	Autonomous Muslim Region in Mindanao
BAI	Bureau of Animal Industry
BFAR	Bureau of Fisheries and Aquatic Resources
CA	Competent authority
CAR	Cordillera Administrative Region
CCRF	Code of Conduct for Responsible Fisheries
CE	Continuing education
CFTD	Capture Fisheries Technology Division
CLSU	Central Luzon State University
CSC	Civil Service Commission
CVL	Central Veterinary Laboratory
CVO	Chief Veterinary Officer
DA	Department of Agriculture
DoH	Department of Health
DVS	Director of Veterinary Services – Chief Veterinary Officer (CVO)
EEZ	Exclusive economic zone
EU	European Union
FARMC	Fisheries and Aquatic Resources Management Council
FAO	Food and Agricultural Organisation of the United Nations
FAOs	Fisheries administrative orders
FBSC	Fisheries Biological Station Complex
FDA	Food and Drug Administration (of the DoH)
FFSAPI	Fresh Frozen Seafood Association of the Philippines
FHMQAL	Fish Health Management and Quality Assurance Laboratory
FHMQAS	Fish Health Management and Quality Assurance Section
FHO	Fish Health Officer
FIDC	Fishery Industry Development Council
FIMC	Fisheries Information Management Center
FLA	Fishpond lease agreements
FLEQRT	Fisheries Law Enforcement Quick Response Team
FOOs	Fisheries office orders
FRMD	Fisheries Resource Management Division
FRQD	Fisheries Regulatory & Quarantine Division
FTS	Foreign Trade Section
GAqP	Good Aquacultural Practice
GDP	Gross domestic product
GVA	Gross value added
Ha	hectare
HACCP	Hazard Analysis Critical Control Points
ICT	Information and Communication Technology
IFAD	Inland Fisheries & Aquaculture Division
IRR	Implementing Rules and Regulations
JOs	Job Orders (temporary appointments in the Civil Service)
Km	Kilometer

LGU	Local Government Unit
MFFTC	Mindanao Freshwater Fisheries Technology Center
MT	Metric ton
NACA	Network of Aquaculture Centres for Asia and Pacific
NAIA	Ninoy Aquino International Airport
NAFC	National Agriculture and Fisheries Council
NBFTC	National Brackish water Fisheries Technology Center
NCR	National Capital Region
NFARMC	National Fisheries and Aquatic Resources Management Council
NFBC	National Fisheries Biological Center
NFFTC	National Freshwater Fisheries Technology Center
NFR	NGOs for Fisheries Reform
NFRDI	National Fisheries Research and Development Institute
NIFTC	National Inland Fisheries Technology Center
NIFTDC	National Integrated Fisheries Technology Development Center
NPPC	Negros Prawn Producers Cooperative
NPPMCI	Negros Prawn Producers Marketing Cooperative, Inc
NRMP	National Residues Monitoring Programme
NSTC	National Seaweeds Technology Center
OIE	World Organisation for Animal Health
OIE-PVS	OIE Performance of Veterinary Services Evaluation Tool
PCR	Polymerase chain reaction
PD	Presidential decree
PFDA	Philippine Fisheries Development Authority
PFO	Provincial Fisheries Officer
Pfil-RASSF	Philippine Rapid Alert System for Food and Feed
PHL	The Philippines
PHP	Philippine Peso
PRBVM	Professional Regulatory Board of Veterinary Medicine
PRC	Professional Regulation Commission
PTFEA	Philippine Tropical Fish Exporters Assn.
PVMA	Philippine Veterinary Medical Association
QRT	Quick Response Team
QRTNE	Quarantine Section
RA	Republic Act (of the Philippines)
RFHO	Regional Fish Health Officer
RFO	Regional Fisheries Office
SFR	Small farm reservoir
UNDP	United Nations Development Program
USAID	United States Agency for International Development
US$	United States dollar
VPH	Veterinary Public Health
VS	Veterinary Service(s)
VSB	Veterinary Statutory Body
WAHIS	World Animal Health Information System

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OIE-PVS AQUATIC ANIMAL HEALTH EVALUATION TEAM

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PART I: EXECUTIVE SUMMARY

Following a request to the OIE from its Government, an evaluation of the aquatic animal health services of The Philippines, based on the OIE-PVS (Performance of Veterinary Services) methodology was conducted in February 2013 by a team of three independent OIE-approved evaluators.

I.1 Introduction

The OIE developed the OIE-PVS (Performance of Veterinary Services) Evaluation Tool to assist Aquatic Animal Health Services (AAHS) – both public and private - to identify their strengths and weaknesses. The OIE-PVS team conducted the OIE-PVS AAHS evaluation in the Philippines with the assistance of the Bureau of Fisheries and Aquatic Resources (BFAR) of the Department of Agricultures (DA), as BFAR is the recognized Competent Authority by countries importing fishery products for human use from the Philippines. BFAR facilitated consultations with a wide range of institutions and interested parties visited throughout the Philippines. The following chapters of this report detail the results of this assessment which are summarised below.

The evaluation began with meetings with the Director of BFAR, the OIE Delegate of the Philippines, the OIE Focal Point for Aquatic Animals, Assistant Directors and senior management officials of the headquarters of BFAR in Manila.

A program was agreed in which the OIE Evaluation Team visited sites and institutions **(public and private sector)** in the cities and regions and discussed the issues with government officials, public and private sector interested parties, small holder fishermen, fish farmers and producers, traders and other stakeholders.

At a closing meeting with the Director of BFAR and Senior Management broad findings of the evaluation were discussed and information provided on the process of finalization of the report.

At all times the Team was impressed with the high level of professionalism and competence shown by all members of the AAHS they were privileged to meet.

The OIE Aquatic Animal Health Code 2012[1] defines “aquatic animal health services” as: “*the governmental and non-governmental organisations that implement animal health and welfare measures and other standards and recommendations in the Aquatic Code in the territory. The Aquatic Animal Health Services are under the overall control and direction of the Competent Authority. Private sector organisations, veterinarians, aquatic animal health professionals or veterinary paraprofessionals are normally accredited or approved by the Competent Authority to deliver the delegated functions.”*

Based on the results of this OIE-PVS Evaluation of the AAHS of the Philippines, and the recommendations provided in the OIE Aquatic Code and Manual, the **main conclusions** are as follows:

- The Bureau of Fisheries and Aquatic Resources (BFAR) is the national implementing organization (Competent Authority) for all matters pertaining to aquatic animal health.
- The BFAR operates within a clearly defined legal framework regulating authority, responsibilities and functions and a clear and direct chain of command from the central level to regional level.
- The BFAR-FHMQAS personnel are dedicated and highly motivated in the performance of their duties.

[1] E.26

- The Fish Health Management and Quality Assurance Section (FHMQAS) of BFAR – being the authority responsible for Aquatic Animal Health Services (AAHS) - undertakes a range of activities effectively, however, there appears to be no over-arching strategy providing direction and coordination for the responsibilities of the AAHS and formal strategic, directive or decision-making structures or capacity to make independent technical decisions in the national interest seem to be lacking. **Therefore a National Strategic Plan for AAH is needed to provide direction for all projects and activities relevant to AAH**.
- In order to comply with OIE Code Standards the AAHS of the Philippines should take due cognizance of endemic as well as exotic diseases in neighbouring countries and the respective geographical region and implement appropriate action. **The Team thus recommends a re-assessment of AAHSs aquatic animal disease control actions and priorities in respect of early disease detection and emergency response.**
- Recruitment, appointment and in-service regulations follow the standards laid down by the Philippine Civil Service Commission. However, **the Team noted with concern that the majority of AAHS personnel are appointed in non-permanent positions, negatively impacting on professional service delivery due to work overloads**. This is primarily due to permanent personnel having to perform multiple tasks which are not delegated to so called “casuals” or “job order” staff

I.2 Key findings of the evaluation

I.2.A Human, physical and financial resources

The AAHS has at present 120 filled positions, of which only 41 (or 30%) are employed on a permanent basis and 79 (or 70%) being employed as so-called “job orders”, being appointed on a service contract without security of tenure**. The Team notes that this high percentage of temporary or contract personnel negatively impacts on the stability and permanency of aquatic animal health professionals such as veterinarians**.

Only 16 out of the total personnel establishment are veterinarians (13%) but only 2 are permanently appointed (5% of the total permanent workforce).

The Team noted that pre-graduate curricula of veterinary schools in the Philippines contain little, if any, training in aquatic animal health, resulting in the **absence of “Day 1-competency” in aquatic animal health**. Likewise the curriculum for the 4-year course in BSc Fisheries contains only an elective course in Health Management in Aquaculture.

BFAR has a clear and functional chain of command from central down to regional and local level of administration

The Team´s general impression of the **physical infrastructure** of the BFAR facilities visited is that it **is inadequate** and maintenance of buildings and replacement of obsolete equipment is necessary for improved functionality.

I.2.B Technical authority and capability

The team found no evidence of harmonised standard diagnostic procedures available to staff, no formal staff training against standards, and very few standard operating procedures. There is no active research or development of diagnostic procedures for diseases of concern. **In general, the Philippine aquatic animal health laboratory network has rudimentary capacity and is unable to meet minimum standards of diagnostic analysis of aquatic animal health.**

BFAR have convened an informal ad-hoc group for risk analysis, however the membership appears fragmented and unstructured due to the process having no dedicated resources to conduct this work

The team noted no evidence of strategic active epidemiological surveillance based on scientific evidence or risk analysis

There is limited national planning for prevention, control and eradication across the entire aquatic animal production structure at all levels.

There is **limited or no national planning for emergency response, decontamination and disposal compliant with international standards**.

There are no on-going national health management strategies to re-establish aquatic animal production capacity following disease incursion and emergency response.

The current traceability system is not functional for the purposes of aquatic animal health management

Traceability of aquatic animals for aquatic animal health purposes back to the primary source of production is not possible, with the exception of shrimp products and finfish products derived from registered premises for processing and export. It must be highlighted that <10% of fish farms are registered nationally.

I.2.C Interaction with stakeholders

BFAR have active communication channels with national organizations involved in aquatic animal production industries, hold regular workshops, facilitate national stakeholder meetings, disseminate information, and research extension activities. The team noted that BFAR regional staff was well known to all public and private sector parties.

The Philippine Regulatory Board of Veterinary Medicine (PRBVM) of the Professional Regulation Commission (PRC) is the 'Veterinary Statutory Body' of the Philippines. This board is under the administrative supervision and direct control of the PRC, the government agency responsible for delivering and maintaining professional standards, including providing professional examinations. However, this regulatory body does not meet a number of requirements as spelled out in the relevant OIE Code standards.

I.2.D Access to markets

The BFAR Legal Division competently engages in the preparation of legislation and regulations at all government administrative levels. The team noted that BFAR also engage in a consultative process with interested relevant parties.

Health certification procedures (including laboratory testing requirements) for export of aquatic animal products for human consumption are not efficient enough for the demands, volume, frequency and logistics of the current regional and international market.

Table 1. Summary results of the Aquatic OIEPVS evaluation

PVS results summary of AAHS Philippines	Level of Advancement	Result
I. HUMAN, PHYSICAL AND FINANCIAL RESOURCES		
I.1.Professional and technical staffing of the Veterinary Services or Aquatic Animal Health Services		
A. Veterinary or aquatic animal health professionals (university qualification)	The majority of veterinary and aquatic animal health professional positions are occupied by appropriately qualified personnel at central and state / provincial levels.	**2**
B. Aquatic animal health professional and other technical personnel (non-university level qualification)	**Not assessed**	
I.2. Competencies of veterinarians or aquatic animal health professionals, and other technical personnel		
A. Professional competencies of veterinary or aquatic animal health professionals (university qualification) including the OIE Day 1 competencies for veterinarians	The *veterinarians*' or aquatic animal health professionals' practices, knowledge and attitudes are of a uniform standard that usually allow for accurate and appropriate clinical and administrative activities of the VS or AAHS.	**2**
B. Competencies of aquatic animal health professional and other technical personnel (non university level qualification)	**Not assessed**	
I-3. Continuing education(CE)	The VS or AAHS have access to CE that is reviewed annually and updated as necessary, but it is implemented only for some categories of the relevant personnel	**3**
I-4. Technical independence	The technical decisions are made and implemented in general accordance with the country's OIE obligations (and with the country's WTO SPS Agreement obligations where applicable).	**4**
I-5. Stability of structures and sustainability of policies	Sustainability of policies is not affected or is slightly affected by changes in the political leadership and/or the structure and leadership of VS or AAHS.	**3**
I-6. Coordination capability of the VS or AAHS		
A. Internal coordination (chain of command)	There are internal coordination mechanisms and a clear and effective chain of command at the national level for most activities.	**4**
B. External coordination	There are formal external coordination mechanisms with clearly described procedures or agreements for some activities and/or sectors.	**3**
I-7. Physical resources	The VS or AAHS have suitable physical resources at national, regional and some local levels and maintenance and replacement of obsolete items occurs only occasionally	**3**
I-8. Operational funding	Funding for new or expanded operations is on a case-by-case basis, not always based on *risk analysis* and/or cost benefit analysis.	**4**
I-9. Emergency funding	No funding arrangements exist and there is no provision for emergency financial resources	**1**
I-10. Capital investment	The VS or AAHS occasionally develops proposals and secures funding for the establishment, maintenance or improvement of operational infrastructure but this is normally through extraordinary allocations.	**2**
I-11. Management of resources and operations	The VS or AAHS have adequate records, documentation and management systems and use these to a limited extent for the control of efficiency and effectiveness.	**3**

II. TECHNICAL AUTHORITY AND CAPABILITY		
II-1. Laboratory diagnosis		
A. Access to laboratory diagnosis	For major *diseases* of national economic importance, the VS or AAHS have access to and use a *laboratory* to obtain a correct diagnosis.	**2**
B. Sustainability of national laboratory infrastructures	The national laboratory infrastructure meets partially the needs of the VS or AAHS, but is not entirely sustainable, as organisational deficiencies with regard to the effective and efficient management of resources and infrastructure (including maintenance) are apparent.	**2**
II-2. Laboratory quality assurance	No laboratories used by the public sector VS or AAHS are using formal QA systems.	**1**
II-3. Risk analysis	The VS or AAHS compile and maintain data but do not have the capability to carry out *risk analysis*. Some *risk management* measures are based on *risk assessment*.	**2**
II-4. Quarantine and border security	The VS or AAHS can establish and apply quarantine and border security procedures; however, these are generally based neither on international standards nor on a *risk analysis*.	**2**
II-5. Epidemiological surveillance and early detection		
A. Passive epidemiological surveillance	The VS or AAHS conduct passive surveillance for some relevant *diseases* and have the capacity to produce national reports on some *diseases*.	**2**
B. Active epidemiological surveillance	The VS/ AAHS conduct active surveillance for some relevant *diseases* (of economic and zoonotic importance) but apply it only in a part of susceptible populations and/or do not update it regularly.	**2**
II-6. Emergency response	The VS or AAHS have a field network and an established procedure to determine whether or not a sanitary emergency exists, but lack the necessary legal and financial support to respond appropriately.	**2**
II-7. Disease prevention, control and eradication	The VS or AAHS implement prevention, control or eradication programmes for some *diseases* and/or in some areas with little or no scientific evaluation of their efficacy and efficiency.	**2**
II-8. Food safety		
A. Regulation, authorisation and inspection of establishments for production, processing and distribution of food of aquatic animal origin	Regulation, authorisation and inspection of relevant *establishments* are undertaken in conformity with international standards in some of the major or selected premises (e.g. only at export premises).	**2**
B. Inspection of collection, slaughter, processing and distribution of products of aquatic animal origin	Inspection, management, implementation and coordination (as appropriate) are generally undertaken in conformity with international standards only for export purposes, including collection of disease information.	**2**
II-9. Veterinary medicines and biologicals	The VS or AAHS have some capability to exercise regulatory and administrative control over veterinary medicines and veterinary biologicals in order to ensure their responsible and prudent use.	**2**
II-10. Residue testing	A comprehensive residue testing programme is performed for all aquatic animal products for export and some for domestic use.	**3**
II-11. Aquatic animal feed safety	The VS or AAHS exercise regulatory and administrative control for most aspects of aquatic animal feed safety.	**3**
II-12. Traceability		
A. Aquatic animal movement control	The VS or AAHS can trace some aquatic animals and control some movements, using traditional methods and/or actions designed and implemented to deal with a specific problem.	**2**

B. Traceability of products of aquatic animal origin	The VS or AAHS can trace some products of aquatic animal origin to deal with a specific problem (e.g. products originating from farms affected by a disease outbreak).	**2**
II-13. Welfare of farmed fish	There is no national legislation on welfare of farmed fish.	**1**
III. INTERACTION WITH INTERESTED PARTIES		
III-1. Communication	The VS or AAHS maintain an official contact point for communication but it is not always up-to-date in providing information.	**3**
III-2. Consultation with interested parties	The VS or AAHS regularly hold workshops and meetings with interested parties.	**4**
III-3. Official representation	The VS or AAHS actively participate[2] in the majority of relevant meetings.	**3**
III-4. Accreditation/authorisation/delegation	The public sector of the VS or AAHS develops accreditation / authorisation / delegation programmes for certain tasks, but these are not routinely reviewed.	**3**
III-5. Veterinary Statutory Body (VSB) and other professional authorities		
A.VSB authority	The *VSB* regulates *veterinarians* in all relevant sectors of the veterinary profession and applies disciplinary measures.	**3**
B.VSB capacity	The *VSB* has the functional capacity to implement its main objectives.	**2**
C. Other professional authorities	The other professional authority has functional capacity to implement its main objectives. It regulates aquatic animal health professionals within certain sectors of the AAH profession and/or does not systematically apply disciplinary measures	**2**
III-6. Participation of producers and other interested parties in joint programmes	Producers and other interested parties are trained to participate in programmes and advise of needed improvements, and participate in early detection of *diseases*.	**3**
IV. ACCESS TO MARKETS		
IV-1. Preparation of legislation and regulations	The VS or AAHS have the authority and the capability to participate in the preparation of national legislation and regulations, with a relevant formal methodology to ensure adequate internal and external quality, involving participation of interested parties in most fields of activity	**4**
IV-2. Implementation of legislation and regulations and compliance thereof	Relevant legislation is generally implemented. As required, the VS or AAHS have a power to take legal action / initiate prosecution in instances of non-compliance in most relevant fields of activity.	**3**
IV-3. International harmonisation	The VS or AAHS monitor the establishment of new and revised international standards, and periodically review national legislation, regulations and *sanitary measures* with the aim of harmonising them, as appropriate, with international standards, but do not actively comment on the draft standards of relevant intergovernmental organisations.	**3**
IV-4. International certification	The VS or AAHS have the authority to certify certain *aquatic animals*, *aquatic animal products*, services and processes, but are not always in compliance with the national legislation and regulations and international standards.	**2**
IV-5. Equivalence and other types of sanitary agreements	The VS or AAHS have the authority to negotiate and approve equivalence and other types of sanitary agreements with trading partners, but no such agreements have been implemented	**2**
IV-6. Transparency	The VS or AAHS notify in compliance with the procedures established by these organisations.	**3**

[2] *Active participation* refers to preparation in advance of, and contributing during the meetings in question, including exploring common solutions and generating proposals and compromises for possible adoption.

IV-7. Zoning	Not applicable at this stage	
IV-8. Compartmentalisation	Not applicable at this stage	

I.3 Key recommendations

I.3.A Human, physical and financial resources

The Team was informed about the envisaged BFAR structural re-organisation process and recommends that the need for an increased number of permanently employed aquatic animal health professionals be addressed as a priority.

Address as a high priority the major deficiency in aquatic animal health training with all relevant stakeholders, primarily with universities and colleges offering pre-graduated training for veterinarians and other professionals

Widen the scope of current CE courses to provide for special focus on aquatic animal health in accordance with OIE international standards

A complete review/audit of the condition and functionality of physical resources available to the AAHs is required in order to prioritize remedial actions.

I.3.B Technical authority and capability

A very important part of the formulation of the National Strategic Plan for the Aquatic Animal Health Service is a **complete assessment of the functionality and capacity of all diagnostic laboratory services rendered at central and regional levels and to investigate rationalization of the available resources**, including infrastructure and equipment.

The Team recommends a re-assessment of AAHSs aquatic animal disease control actions and priorities in respect of early disease detection and emergency response.

Constitute a permanent expert consultative committee (core competency group of AAH veterinarians) to render professional support, advice on actions coordinate emergency aquatic animal disease response.

Conduct a simulation exercise for disease preparedness and training purposes.

Review the aquatic animal health diagnostic disciplines that are required to obtain a correct diagnosis; plan, invest and develop national capacity based on the review outcomes.

Develop national standard diagnostic procedures. Validate and harmonise tests across the national diagnostic network. Review standard diagnostic procedures on a regular basis and as required.

Provide for a dedicated and trained team to undertake risk analysis according to international standards and **establish a risk analysis section under the Fisheries Regulatory and Quarantine Division of BFAR**.

The “Quick Response Team” (QRT) focus is limited to fish kills and should expand according to future strategic planning for aquatic animal health management

Include bio-security plans and active biosecurity management in all research and development programs and provide extension services to help develop on-farm bio-security plans and training for the relevant private interested parties such as fish farmers, hatcheries etc..

BFAR should conduct a risk analysis or review on the need and feasibility of a national movement control system under the existing administrative structure.

Review the extent of the practice and the disease risks associated with feeding unprocessed aquatic animals (trash fish) to aquatic animals used in aquaculture and research.

I.3.C Interaction with stakeholders

BFAR should make use of its extensive information and extension programmes to target aquatic animal disease information, such as disease prevention, control and eradication measures. Specifically the **dire need for bio-security measures needs to be addressed** as a high priority throughout the aquatic farming and food chain.

BFAR-FHMQAS representative should attend OIE General Sessions as a member of the Philippine delegation when applicable to the Session's agenda.

The BFAR-FHMQAS representative should attend OIE training workshops on WAHIS

I.3.D Access to markets

The team recommends a review of procedures regarding international certification for aquatic animals and products in compliance with OIE standards.

BFAR shouldddevelop the skills and administrative procedures required to effectively negotiate on import/export countries certification requirements with the relevant competent authorities and against the international standards.

PART II: CONDUCT OF THE EVALUATION

At the request of the Government of The Philippines, the Director General of the OIE, Dr. Bernard Vallat, appointed an independent OIE-PVS team consisting of Dr Herbert Schneider (Team leader), Dr Geoff Grossel and Dr. Gillian Mylrea (OIE Technical Experts) to undertake an evaluation of the aquatic animal health services of The Philippines. The evaluation was carried out against the OIE criteria (chapters 3.1 and 3.2 of the 2011 OIE Aquatic Animal Health Code), using the 2010 OIE-PVS Tool as a guide. The evaluation was carried out from 4th to 18thFebruary 2013.

II.1 OIE PVS Tool: method, objectives and scope of the evaluation

To assist countries to establish their current level of performance, form a shared vision, establish priorities and carry out strategic initiatives, the OIE has developed an evaluation tool called the OIE Tool for the Evaluation of Performance of Veterinary Services (OIE PVS Tool[3]) which comprises four fundamental components:

- Human, physical and financial resources
- Technical authority and capability
- Interaction with interested parties
- Access to markets.

These four fundamental components encompass **47** critical competencies (including sub-divisions), for each of which five qualitative levels of advancement are described. For each critical competency, a list of suggested indicators was used by the OIE Evaluation Team to help determine the level of advancement.

A glossary of terms is provided in Appendix 2.

The report follows the structure of the OIE PVS Tool – Aquatic. The objective and scope of the Aquatic PVS evaluation includes all aspects relevant to the OIE Aquatic and Terrestrial Animal Health Codes. In addition, the scope and objectives were clarified before the mission (see Appendix 7) as appropriate to the mandate and context of the AAHS in this country.

[3]www.oie.int

II.2 Country information (geography, administration, agriculture and livestock)

Figure 1: The Philippines[4].

[4] hhttp://www.google.com.na/imgres?imgurl=http://images.nationmaster.com/images/motw/middle_east_and_asia/philippines

GEOGRAPHY

The Philippine archipelago lies in Southeast Asia in a position that has led to its becoming a cultural crossroads, a place where Malays, Hindus, Arabs, Chinese, Spaniards, Americans, and others have interacted to forge a unique cultural and racial blend.

The archipelago numbers some 7,107 islands and the nation claims an exclusive economic zone (EEZ) of 200 nautical miles (370 km) from its shores.

The Philippines occupies an area that stretches for 1,850 kilometres from about the fifth to the twentieth parallels north latitude. The total land area is slightly more than 300,000 square kilometres.

Only approximately 1,000 of its islands are populated, and fewer than one-half of these are larger than 2.5 square kilometres. Eleven islands make up 95 % of the Philippine landmass, and two of these — Luzon and Mindanao — measure 105,000 and 95,000 square kilometres, respectively. They, together with the cluster of the Visayan Islands that separate them, represent the three principal regions of the archipelago that are identified by the three stars on the Philippine flag. Topographically, the Philippines is broken up by the sea, which gives it one of the longest coastlines of any nation in the world. Most Filipinos live on or near the coast, where they can easily supplement their diet from approximately 2,000 species of fish[5].

CLIMATE AND AGRO-ECOLOGICAL ZONES

The Philippines has a tropical wet climate dominated by a rainy season and a dry season. The summer monsoon brings heavy rains to most of the archipelago from May to October, whereas the winter monsoon brings cooler and drier air from December to February. Manila and most of the lowland areas are hot and dusty from March to May. Even at this time, however, temperatures rarely rise above 37°C (98.6 °F). Mean annual sea-level temperatures rarely fall below 27 °C (80.6 °F). Annual rainfall measures as much as 5,000 millimeters (196.9 in) in the mountainous east coast section of the country, but less than 1,000 millimeters (39.4 in) in some of the sheltered valleys.

Monsoon rains, although hard and drenching, are not normally associated with high winds and waves. But the Philippines sit astride the typhoon belt, and it suffers an annual onslaught of dangerous storms from July through October. These are especially hazardous for northern and eastern Luzon and the Bicol and Eastern Visayas regions, but Manila gets devastated periodically as well. The Philippines is prone to about 18-21 typhoons per year.

The islands typically have narrow coastal plains and numerous swift-running streams. Every island has sand beaches, but few open onto spacious lowlands. There are few large plains or navigable rivers.

ADMINISTRATION[6]

The Philippines is divided into **17 regions** with all provinces grouped into one of 16regionsfor administrative convenience. The National Capital Region however, is divided into four special districts.

The Regions are divided into a hierarchy of local government units (LGUs) with the 80 provinces as the primary unit. Provinces are further subdivided into cities and municipalities, which are in turn composed of barangays. The barangay is the smallest local government unit.

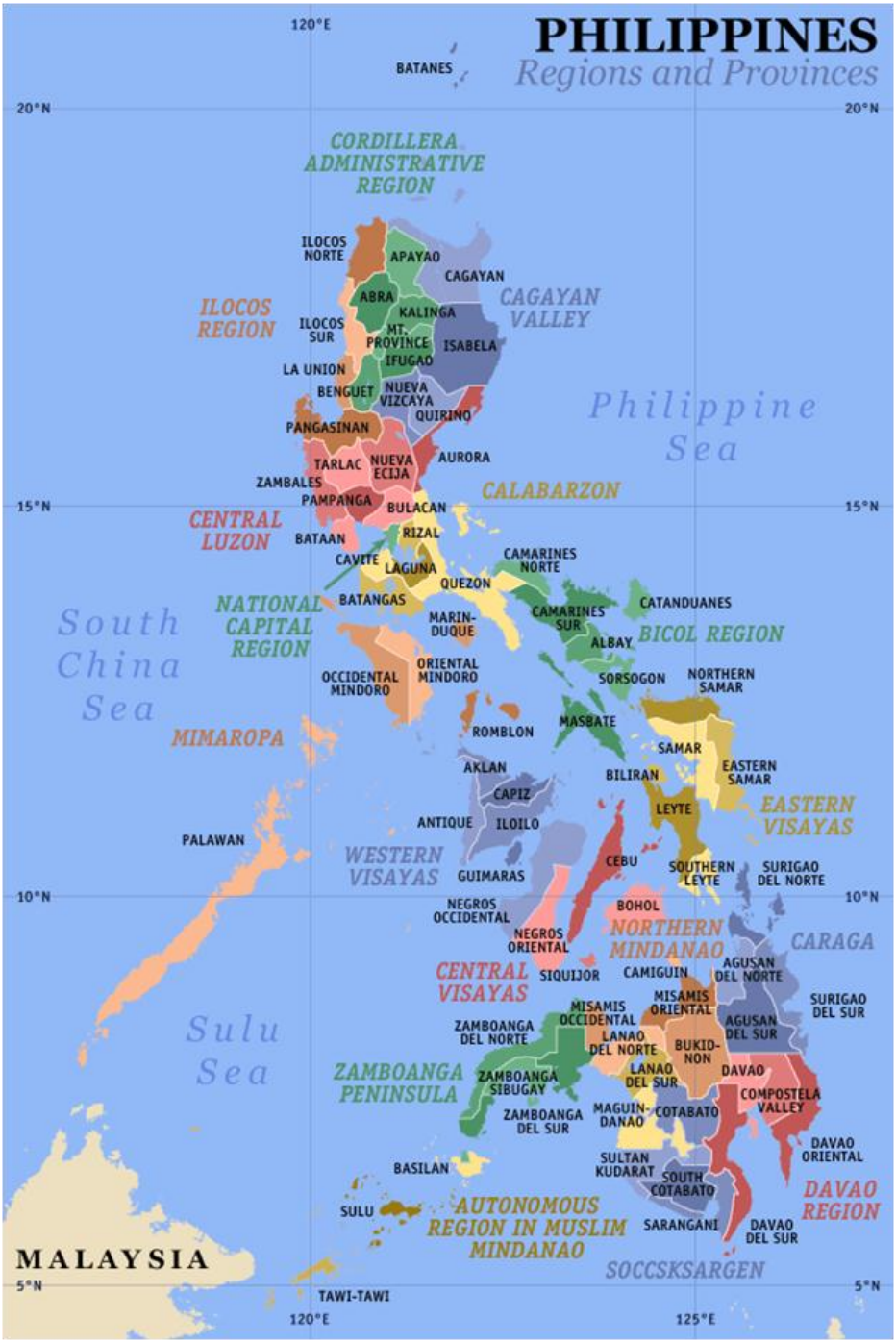
Most government offices establish regional offices to serve the constituent provinces. The regions themselves do not possess a separate local government, with the exception of the Autonomous Region in Muslim Mindanao.

[5] http://en.wikipedia.org/wiki/Geography_of_the_Philippines
[6] http://en.wikipedia.org/wiki/Geography_of_the_Philippines

Table 2. Administrative Regions (*Regions visited by the OIEPVS (Aquatic) Team*)

Region	Designation	Regional centre
Ilocos Region	Region I	San Fernando, La Union
Cagayan Valley	Region II	Tuguegarao, Cagayan
Central Luzon	Region III	San Fernando, Pampanga
CALABARZON	Region IV-A	Calamba, Laguna
MIMAROPA	Region IV-B	Callahan, Oriental Mindoro
Bicol Region	Region V	Legazpi, Albay
Western Visayas	Region VI	Iloilo City
Central Visayas	Region VII	Cebu City
Eastern Visayas	Region VIII	Tacloban
Zamboanga Peninsula	Region IX	Pagadian
Northern Mindanao	Region X	Cagayan de Oro
Davao Region	Region XI	Davao City
SOCCSKSARGEN	Region XII	Koronadal, South Cotabato
Caraga	Region XIII	Butuan
Autonomous Region in Muslim Mindanao	ARMM	Cotabato City
Cordillera Administrative Region	CAR	Baguio
National Capital Region (NCR)	NCR	Manila

Figure 3: Regions and Provinces of the Philippines[7]



AGRICULTURE AND LIVESTOCK PRODUCTION

Agriculture in the Philippines continues to be a major economic activity and is estimated to employ more than 35% of the labour force with livestock providing approximately 20% of the total agricultural income. In 2007, there were estimated to be approximately 2.6m cattle (100,000 dairy cattle), 4m goats, 13.5 m pigs, 135m poultry and 3.4m carabaos (Asian water buffalo)[8].

[7] http://www.google.com.na/#hl=de&gs_nf=3&pq=philippines
[8] E.4

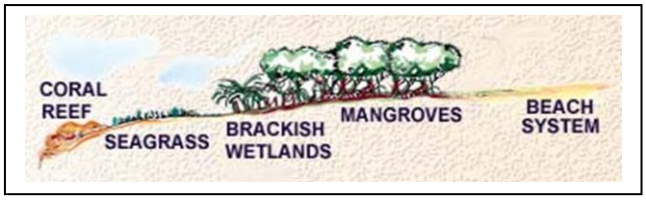
For the first 9 months of 2012[9], **agriculture grew by 1.93 % during the first nine months of 2012.** Crops, livestock and poultry subsectors recorded output increases. The fisheries subsector continued to post declining production. The gross value of agricultural production which amounted to PHP 956.0 billion at current prices was 0.23 % lower than last year's level. The livestock subsector recorded a 0.86 % growth in production. It contributed 15.62 % to total agricultural output. Slower production growth was observed for hog and cattle. There was bigger gain in dairy production. The gross value of livestock production was P150.9 billion at current prices, representing a 1.32 % reduction in gross earnings this year. Poultry production went up by 4.62 %. The subsector shared 14.28 % in the total agricultural production. All livestock and poultry components posted output increments except duck. Gross earnings of the subsector amounted to P121.7 billion at current prices, higher by 4.82 % from the 2011 record.

MARINE AND COASTAL ENVIRONMENTS AND HABITATS[10]

Marine biodiversity

In the Philippines, the greatest marine biodiversity can be found in the mixed coastal fauna of the coral reefs, mangroves and seagrass beds. These habitats host well over 5,000 species of plants and animals, including, according to one estimate, 1,400 species of fish, 1,400 species of crustaceans, more than 900 species of seaweeds, and as an untold number of unknown species. More than 17% of the better known fish are endemic to the Philippines, and there are more than 90 genera and at least 400 species of coral known to thrive in Philippine tropical water. However, this biodiversity is under constant threat. Already, the dugong and four marine turtles, particularly the hawksbill and the green turtle, are endangered because of the loss of habitat and overcollecting

Coastal habitat



The Philippine coastal zone is typical of tropical coasts, with five major resource units occurring along its shallow coastlines: coral reefs, mangrove ecosystems, beach systems, estuaries and lagoons, and seagrass beds.

Coral Reefs. The Philippines lies in the Indo-West Pacific Region, reputedly the world's highest biodiversity marine area, and is part of what is known as the "coral triangle," the center of the most diverse habitat in the marine tropics.

Reports say the country's coral reefs host about 400 species of corals, 971 species of benthic algae, and a third of the 2,300 fish species known to inhabit Philippine waters. There are 27,000 sq km of coral reef areas in the Philippines, with 60% of them occurring in Palawan

Mangroves.

In 1920, the Philippine mangrove forest area was estimated to be around 450,000 hectares. Largely as a result of conversion to fishponds and salt beds, clear-cutting of trees for firewood and other domestic uses, and reclamation for industrial or other development purposes, this area has shrunk to less than 150,000 hectares, of which 22% are in Palawan, 32% in Mindanao, and 23% in Eastern Visayas and Bohol. From 1980 to 1991, mangrove areas were depleted at a rate of about 3,700 hectares per year, mostly due to conversion to fishponds. Today, old-growth mangrove areas are said to be no more than 20,000 hectares, about two-thirds of which are in Palawan and the remainder in Zamboanga del Sur Even so, mangroves, principally members of the genera *Bruguiera, Ceriops,* and *Rhizophora*

[9] http://www.bas.gov.ph/?ids=agriperformance
[10] 1996-2004 *Coastal Resource Management Project (CRMP)-accessed* *http://oneocean.org/about_crmp/index.html*

(Rhizophoraceae) and the families *Avicenniaceae* and *Sonneratiaceae* continue to be an important resource base for the Philippines, providing a range of fishery products such as crustaceans and molluscs, an as yet untapped source of medicinal products, and other less measurable benefits such as shore protection and nutrient cycling.

Beach systems.

Most small Philippine islands have coral sand beaches, i.e., beaches formed by coral reef growth and erosion. Forming an integral part of the reef communities, these beaches depend on healthy coral reefs for continued supplies of sand, at the same time supporting crustaceans, molluscs and some worms. Undisturbed beaches also serve as nesting places for sea turtles. Unregulated and unplanned development of beaches for tourism and the quarrying of sand for construction and other purposes are two of the most common threats to beaches in the Philippines.

Seagrasses.

According to seagrass expert Miguel D. Fortes, (*Seagrasses: A Resource Unknown in the ASEAN Region*), the Philippines has 16 known species of seagrasses, the highest number in the Indo-Pacific region. These species are valued mainly for their role as fish nursery areas and as foraging grounds for food fish, dugong, turtles and wading birds. The depletion of seagrass beds is known to result in high water turbidity and lower production of seagrasses and their associated fauna. Like the other coastal ecosystems, seagrass ecosystems in the Philippines are under threat from various natural and man-made forces -- typhoons, tidal waves, and volcanic activity as well as mining, aquaculture, deforestation and blast fishing.

HUMAN DEMOGRAPHIC DATA

Table 3. Human demographic data: 2010[11]

Region/Province/Highly Urbanized City	Total Population
Philippines	**92,337,852** [c]
National Capital Region	11,855,975
Cordillera Administrative Region	1,616,867
Region I – Ilocos Region	4,748,372
Region II – Cagayan Valley	3,229,163
Region III – Central Luzon	10,137,737
Region IVA – CALABARZON	12,609,803
Region IVB – MIMAROPA	2,744,671
Region V – Bicol Region	5,420,411
Region VI – Western Visayas	7,102,438
Region VII – Central Visayas	6,800,180
Region VIII – Eastern Visayas	4,101,322
Region IX – Zamboanga Peninsula	3,407,353
Region X – Northern Mindanao	4,297,323
Region XI – Davao Region	4,468,563
Region XII – SOCCSKSARGEN	4,109,571
Autonomous Region of Muslim Mindanao	3,256,140
CARAGA	2,429,224

Source: National Statistics Office, 2010 Census of Population and Housing

[11] E. 1a

PHILIPPINES FISHERY RESOURCES, 2010[12]

A. Marine Resources

1. Total Territorial Water Area (including the EEZ)	**2,200,000 sq km**
a. Coastal	*266,000 sq km*
b. Oceanic	*1,934,000 sq km*
2. Shelf Area (Depth: 200 m)	**184,600 sq km**
3. Coral Reef Area *(Within the 10-20 fathoms where reef fisheries occur)*	**27,000 sq km**
4. Coastline (length)	**36,289 km**

B. Inland Resources

1. Swamplands	**246,063 ha**
a. Freshwater	*106,328 ha*
b. Brackish water	*139,735 ha*
2. Existing Fishpond	**253,854 ha**
a. Freshwater	*14,531 ha*
b. Brackish water	*239,323 ha*
3. Other Inland Resources	**250,000 ha**
a. Lakes	*200,000 ha*
b. Rivers	*31,000 ha*
c. Reservoirs	*19,000 ha*

THE PHILIPPINE FISHERIES SECTOR[13,14]

AQUACULTURE SECTOR[15]

Aquaculture in the Philippines has a long history and involves many species and culture systems.

Aquaculture includes production from the following**:**

- Brackish water Fish pond
- Fresh water Fish pond
- Fish pen and fish cage in fresh and marine waters
- Mariculture

In **2009**, the Philippines ranked **6th among the top fish producing countries** in the world with its total production of 5.08 million metric tons of fish, crustaceans, molluscs, and aquatic plants (including seaweeds). The production constitutes 3.12% of the total world production of 162.8 million metric tons (*FAO website*). The Philippines' 0.737 million metric tons **aquaculture production of fish, crustaceans and molluscs in 2009 ranked 11th in the world** and represent 1.32% share to the total global aquaculture production of 55.68 million metric tons. In terms of value, the country's aquaculture production of fish, crustaceans and molluscs has amounted to over 1.49 billion dollars (FAO *website*).

Similarly, the Philippines is the world's 3rd largest producer of aquatic plants (including seaweeds) having produced a total of 1.74 million metric tons or nearly 10.03% of the total world production of 17.34 million metric tons (FAO *website*).

Aquaculture households / farms[16]:

[12] E.14
[13] E.14
[14] http://www.fao.org/fishery/countrysector/naso_philippines/en
[15] http://www.fao.org/fishery/countrysector/naso_philippines/en

Table 4. Summary of the Aquaculture Production by Culture Environment and Region,2011 (mt)

Region	Aquaculture Production Area						
	Brackish water	Fresh water	Marine water	Oyster	Mussel	Seaweed	Grouper
NCR	802	1,651	0	0	256.01	0	0
CAR	0	2,676	0	0	0	0	0
I	20,882	9,262	72,144	4,268.04	791.07	195.74	1.16
II	3,276	8,252	0	617.83	0	1,798.71	2.24
III	88,626	113,531	3,366	4,508.65	1,438.28	789.34	7.24
IV A	15,072	135,907	1	995.78	6,435.54	46,832.17	8.47
IV B	4,589	628	443	0	0	483,190.81	440.07
V	8,007	9,235	222	4.05	12.7	58,841.98	12.91
VI	85,713	1,512	1,128	9,623.50	9,000.71	72,865.00	60.42
VII	7,979	170	474	720.27	0	137,871.47	3.16
VIII	8,638	353	4,850	48.35	4,508.10	31,939.63	371.99
IX	20,899	165	116	382.20	0	254,521.10	111.25
X	27,481	967	2,333	1.06	0.83	42,618.67	0
XI	4,285	2,136	17,350	292.10	0	2,067.17	1.06
XII	8,657	14,441	2,454	0	0	448.95	1.79
CARAGA	2,488	234	363	0	0	20,401.58	3.17
ARMM	3,704	5,513	107	0	0	686,450.54	24.59
TOTAL for Country	**304,276**	**308,051**	**88,723**	**21,461.82**	**22,442.71**	**1,840,832.86**	**1,064.26**
Source: Bureau of Agricultural Statistics							

Table 5. Fisheries (Aquaculture) Production Data per Species for 2011 (mt)[17]

Name of Species	2011 (metric tons)
Tilapia	257,385.44
Milkfish	372,580.80
Tiger prawn	47,494.68
Mud crab	15,730.91
Carp	17,340.87
Catfish	3,129.06
Grouper	1,064.26
Oyster	21,461.82
Mussel	22,442.71
Sea weed	1,840,832.86
Source: Bureau of Agricultural Statistics	

Aquaculture continues to be the main engine in the fisheries sector with an increase of 2.44% or a total volume of 2,608,118.81 MT.

The substantial growth of aquaculture production can be attributed to more stocking activities due to availability of fingerlings and abundant natural food supply in some areas[18].

[16] E. 1a
[17] E.1a
[18] EM.3

CAPTURE FISHERIES

Capture fisheries[19] are classified into **municipal** (or small-scale) and **commercial:**

Municipal fishing is undertaken within municipal waters using fishing vessels of three (3) gross tons or less, or fishing not requiring the use of fishing vessels. Municipal waters refer to tidal waters within the municipality (which are not included within protected areas or fishery reserves) and marine waters within 15 kilometers from the coastline.

Municipal fisheries production went down by 2.84 % or posted a production of 1,332,383.15 MT. The effects of strong winds and rough seas from the successive typhoons resulted to lesser fishing activities. In addition, fishermen complained of high operating expenses by high fuel cost during the period.

Commercial fishing involves the use of passive or active gear for trade, business or profit beyond subsistence or sports fishing. It is further classified into: a) small scale – fishing with vessels of 3.1 gross tons (GT) up to 20 GT; b) medium scale – fishing utilizing vessels of 20.1 GT up to 150 GT; c) large scale – fishing utilizing vessels of more than 150 GT.

A decline of 16.29 % from the **commercial fisheries** with a production of 1,039,758.58 MT was recorded. Various factors contributed to this decline such as decrease in fishing efforts due to bad weather conditions, dry docking of fishing vessels and depletion of fish species in some fishing grounds[20].

Table 6. Commercial Fisheries Production, by Major Fish Species, 2010[21]

Major Species	Total(MT)	% to Total
1. Rounscad (Galunggong)	194,671.16	15.7
2. Indian sardines (Tamban)	265,810.92	21.4
3. Frigatetuna (Tulingan)	80,621.65	6.5
4. Skipjack (Gulyasan)	177,698.05	14.3
5. Yellowfin tuna (Tambakol/Bariles)	85,351.5	6.9
6. Big-eyed scad (Matang-baka)	44,643.44	3.6
7. Fimbriated sardines (Tunsoy)	55,176.04	4.4
8. Slipmouth (Sapsap)	20,308.54	1.6
9. Eastern Little tuna (Bonito)	23,102.83	1.9
10. Indian mackerel (Alumahan)	43,152.33	3.5
11. Indo-pacific mackerel (Hasa-hasa)	23,392.07	1.9
11. Other Species	228,173.18	18.4
TOTAL	**1,242,101.76**	**100.0**

PERFORMANCE OF THE FISHERIES SECTOR 2011[22,2324,]

For more than a decade, the production of the fisheries sector in the Philippines has been growing substantially. For **2011**, the fisheries production totaled to 4,980,260.54 metric tons (MT) where it experienced a slight decrease of 3.47 % from the previous year's production of 5,159,458.67 MT. This was caused by the production shortfalls of both commercial and municipal sectors.

[19] http://siteresources.worldbank.org/INTPHILIPPINES/Resources/WBCEAPhilCoastalandMarineSectorReportFINAL.pdf
[20] EM.3
[21] E.14
[22] http://www.da.gov.ph/index.php/2012-03-27-12-03-56/2012-04-13-12-39-39
[23] E.14
[24] EM.3

Fisheries Contribution to the National Economy, 2010[25]

The fishing industry's contribution to the country's Gross Domestic Products (GDP) in **2010** was 2 % and 2.4% at current and constant prices, respectively. This translates to some Philippine Peso (PHP)180 billion for current prices and PHP 136.4 billion for constant prices of the country's GDP of PHP 9,003.5 billion (current prices) and PHP 5,702 billion (constant prices).The industry also accounted for 16.2% (PHP 180 billion) and 20.6%(PHP 136.4 billion) of the Gross Value Added (GVA) in Agriculture, Fishery and Forestry Group of PHP 1,108.7 billion and PHP 662.7 billion a tcurrent and constant prices, respectively, the largest share next to agricultural crops.

Fisheries Contribution to Total GDP 2010

1. At current Prices 2.0%
2. At constant Prices 2.4%

Table 7. Fisheries Contribution to GVA[26] in Agriculture, Hunting, Forestry and Fishing by industry group

Industry Group	At Current Prices (PHP Mill)	% to Agricultural Sector	At Constant Prices (PHP Mill)	% to Agricultural Sector
Agricultural crops (Palay, corn, coconut etc.)	600,264	54,1	317,478	47,9
Livestock	150,329	13,6	90,478	13,7
Poultry	101,846	9,2	68,256	10,3
Agricultural activities	73,707	6,6	47,345	7,1
Forestry	2, 435	0,2	2,676	0,4
Fishing	**180,137**	**16,2**	**136 432**	20,6
TOTAL	1,108,718	100	662,665	100

Employment in the Fishing Industry

The industry employed a total of 1,614,368 fishing operators nationwide (NSO 2002 Census for Fisheries) of which the municipal fisheries sector accounted for more than one million (1,371,676)operators while the commercial and aquaculture sectors added some 16,497 and 226,195 operators, respectively.

Table 8. Preliminary Data on the Number of Fishing Operators by Sector, 2002*

1. Aquaculture	226, 195	operators
2. Municipal	1, 371, 676	operators
3. Commercial	16, 497	operators
Total	**1, 614, 368**	**operators**

***Based on 2002 CensusofFisheries**

[25] E.14

[26] **Gross value added** (**GVA**) In national accounts GVA is output minus intermediate consumption

FISHERIES EXPORT AND IMPORT PERFORMANCE, 2010[27]

Exports

- Foreign trade performance of the fishery industry in **2010** registered a net surplus of 616 million dollars – total export value of 803 million US dollars and import value of 187 million US dollars.
- Moreover, export volume registered a total of 12.45% or 220,992 MT in 2010 as compared to the 196,521 MT of fish and fishery products the country has exported in 2009. The three major export commodities (tuna, seaweeds, shrimp/prawn,) combined for 67% (148,615 MT) of the total export volume (220,992 MT) and 67% (US$545.3 million) of the total export value (US$ 803 million) in 2010.
- Tuna remained as the top export commodity with a collective volume of 106,449 MT for fresh/chilled/frozen, smoked/dried, and canned tuna products valued at US $337.719 million. Canned tuna, though, constitutes bulk of tuna products being exported. In general, tuna export went up by 2% in terms of volume and 3% in terms of value. Major markets for this commodity include USA, UK and Germany.
- Seaweeds came 2nd on export value with 42.6% increase from US$99.438 million in 2009 to US$ 155.61 million in 2010 or 19% share to the total export earnings for that year. Carrageenan remains the major product being shipped abroad representing 75% of the total seaweed export value. USA, China and France are among the major markets for Philippine seaweed products.
- Shrimp/Prawn ranked 3rd with a total contribution of US$52 million to the total export value, lower than last years export earnings of $55.1 million. Most of the shrimps/prawns are exported in fresh/chilled/frozen form with a total value of US$ 52 million or 98% of the total shrimp/prawn export revenue. The 2010 shrimp/prawn exports, however, fell by 7% in volume (MT) and 6% down in value (US$) from the previous year's export. Japan, USA and Taiwan are among the major destination of shrimp/prawn products.
- Other major fishery exports (e.g. crabs/crab fats, octopus, lapu-lapu, cuttlefish/squid, ornamental fish, roundscad and sea cucumber) constitute 84% or US$ 677.8 million of the total US$ 803.2 million export revenues. Other commodities accounted for the remaining 16% of the total export value/earnings.

Table 9. Export of Fish and Fishery Products by Kind, Quantity and Value, 2009[28],[29]

Commodity/Kind		Quantity(MT)	FOB Value	
			(US$)	(PHP)
A.	Fish, crustaceans, molluscs, etc. and Preparation	169,104	572,949	27,100,474
A.1	Fish fresh (live/dead) chilled/frozen	44,941	143,277	6,776,992
A.2	Fish, dried, salted/in brine; smoked fish	2,179	7,623	360,550
A.3	Crustaceans, molluscs and aquatic invertebrates	23,410	119,342	5,644,878
A.4	Fish and other aquatic invertebrate, prepared/preserved	98,574	302,707	14,318,054
B.	Shells and by-Products	1,552	1,104	52,242
C.	Miscellaneous and other fishery products	25,865	100,808	4,768,225
	Grand Total	**196,521**	**674,861**	**31,920,941**

[27] E.14
[28] http://www.bfar.da.gov.ph/pages/AboutUs/maintabs/stat-externaltrade.html
[29] E.14

Table 10. For the period Jan-Nov 2012 the main live exports of fish to regional and international destinations* were:[30]

Species	Quantity (kg)	Place of Origin	Type of transport	Port of exit
Live marine & fresh water ornamental fish	4,143,047.30	Zambales, Batangas, Cebu, Quezon, Marinduque, Palawan, Aklan, Bataan, Bicol, Mindoro, Samar, Appari and Bohol	Airfreight Carrier	Ninoy Aquino International Airport (NAIA)
Live sand crabs	296,467.00	Roxas City	Airfreight Carrier	NAIA
Live mud crabs	3,975,569.00	Bacolod and Roxas City	Airfreight Carrier	NAIA
Live groupers	1,081,740.00	Palawan, Zamboanga, Roxas, Surigao Del Norte and Bicol	Airfreight Carrier	NAIA
Live lobsters	1,081,740.00	Palawan and Zamboanga	Airfreight Carrier	NAIA
Live slipper lobsters	141,051.20	Palawan and Zamboanga	Airfreight Carrier	NAIA
Live eels	143,131.87	Bulacan, Bacolod, Isabela, Bicol, Iloilo and Cotabato	Airfreight Carrier	NAIA
Live stone fish	116,034.00	Palawan and Zamboanga	Airfreight Carrier	NAIA
Live sea mantis	486,320.00	Zamboanga	Airfreight Carrier	NAIA
Live nylon shell	1,517,450.00	Bicol, Bacolod and Iloilo City	Airfreight Carrier	NAIA
Live tilapia fingerlings	8,359.00		Airfreight Carrier	NAIA
Live pompano	4,862.00		Airfreight Carrier	NAIA

***** Regional destinations include Thailand, Singapore, PR China, Vietnam, Hong Kong, Taiwan, Macau, Japan, Korea etc and International destinations were e. g. USA, Australia, EU etc.

Among the major destinations of Philippine fish and fishery product exports 2009 (in terms of value) with percentage share are: USA, 25.1%; Japan, 10.8%; Germany , 7.7%; Hong Kong 6.9%; UK, 5.7%; Spain, 4.9% ; France, 3.2%, , Taiwan (ROC) 2.6%, Canada, 2.4%, and China, (Peoples Rep of) 2.3%; . Other countries have a cumulative share of 28%.

Imports

- 73% of the total import value for **2010** was contributed by three major commodities in **chilled/frozen fish, 49%, prawn feeds**, 4%; as well as flour, meals and pellets of fish, crustaceans, and molluscs fit and unfit for human consumption, 6 %. These commodities have an aggregated value of US$ 110.4 million out of the US$ 187.2 million total import value.
- **Prawn feeds** were mostly sourced from Thailand (90.7%); Taiwan (5.3%); Singapore (1 %); China (1.8%); Hong Kong (0.18%); and USA (0.03%); with a total of $ 7.53 million on import value.
- Chilled/frozen fish comprise of tuna, mackerel and sardines with a total of US$ 92.3 million. Tuna has an import value of US $59.1 million, the largest among the three major imports, with a share of 32%. These were mostly supplied by Papua New Guinea (8 %); Taiwan (ROC) (10%); Japan (4.3%); Singapore (1%) and Korea Republic (6%). Other fishery imports include mackerel (17%) and sardines (1%).
- In terms of value, in general, the Philippine fishery imports originated from the following major countries: China (20%); Indonesia (17%); Taiwan (ROC) (12%);

[30] E.1a

Papua New Guinea, (10%); Vietnam (8%); Japan (7%); Korea Republic (7%); USA (5%); and Denmark (2%). Other countries contributed 1% to the total import value of fish and fishery products

Table 11. Imports of Fish and Fishery Products by Kind, Quantity and Value, 2009[31]

Commodity/Kind		Quantity (MT)	CIF Value	
			('000US$)	('000 PHP)
Fish, crustaceans, mollusks, etc. and preparation		240,341	170,199	8,191,967
a.	Fish fresh (live or dead) chilled or frozen	201,930	147,714	7,109,465
b.	Fish, dried, salted or in brine,smoked fish	65	267	12,835
c.	Crustaceans, mollusks and aquatic invertebrates	36,635	20,158	970,186
d.	Fish and other aquatic invertebrate, prepared/preserved	1,711	2,061	99211
Shells and by-products		621	148	7,137
Miscellaneous and other fishery products		50,667	52,917	2,546,911
Grand Total		**291,629**	**223,265**	**10,745,745**

II.3 Context of the evaluation

II.3.A Availability of data relevant to the evaluation

In accordance with the provisions of the OIE-PVS Manual, pre-mission requests for data and background information were submitted during November 2012.

A list of documents received by the Team before and during the PVS Evaluation mission is provided in Appendix 6. All documents listed in Appendix 6 are referenced, where applicable, to relevant critical competencies to demonstrate the levels. Documents and pictures are also referenced to relevant critical competencies to support the related findings.

II.3.B General organisation of the Philippines Aquatic Animal Health Services[32]

By virtue of Presidential Decree No. 461, signed on May 17, 1974, which reorganized the Department of Agriculture and the Department of Natural Resources, the Philippine Fisheries Commission was renamed ***Bureau of Fisheries and Aquatic Resources*(BFAR)** and placed under the Ministry of Natural Resources.

On June 30, 1984, BFAR was transferred from the Ministry of Natural Resources to the Ministry of Agriculture and Food and the staff functions of the Central Office and the integration of BFAR's Regional Offices into Regional Offices of the Department of Agriculture was fully implemented with the issuance of Executive Order 116, signed by President Corazon Aquino on January 30, 1987.

The Department of Agriculture is the principal agency of the Philippine government responsible for the promotion of agricultural and fisheries development and growth. In pursuit of this, it provides a policy framework that directs public investments and, in partnership with the local government units (LGUs), provides the support services necessary to make agriculture and fisheries, and agri-based enterprises profitable

[31] http://www.bfar.da.gov.ph/pages/AboutUs/maintabs/stat-externaltrade.html
[32] http://www.bfar.da.gov.ph/pages/AboutUs/maintabs/history2.html

and to help spread the benefits of development to the poor, particularly those in the rural areas.[33]

Figure4: Organogram of the Department of Agriculture[34]

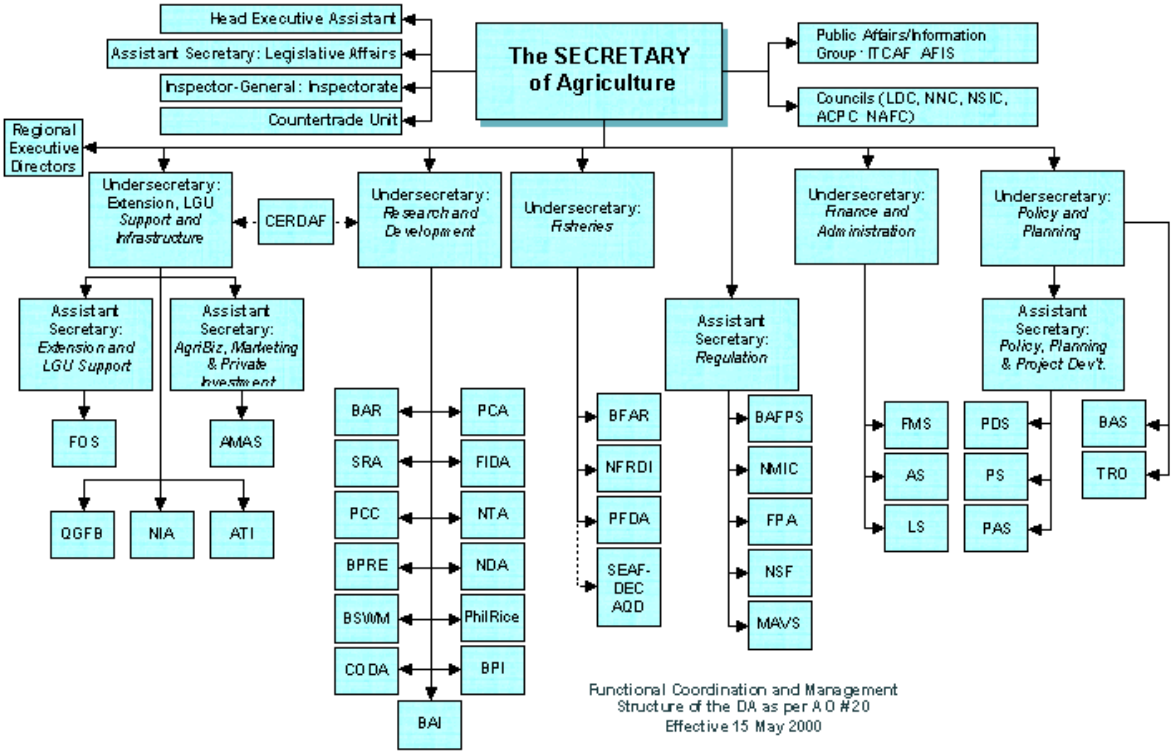


Figure5: Organizational Structure and Interrelationship of BFAR Units involved In the Aquatic Animal Health Service (AAHS)[35]

Legend:

1. FRQD - Fisheries Regulatory & Quarantine Division
2. FHMQAL - Fish Health Management and Quality Assurance Laboratory
3. FRMD - Fisheries Resource Management Division
4. LGU - Local Government Unit
5. FTS - Foreign Trade Section
6. QRTNE - Quarantine Section
7. FHMQAS - Fish Health Management and Quality Assurance Section
8. FHO - Fish Health Officer
9. RFHO - Regional Fish Health Officer

The main authority that is responsible in the Aquatic Animal Health Services is the Fish Health Management and Quality Assurance Section (FHMQAS) of the Bureau of Fisheries and Aquatic Resources (BFAR). Together with the Regional Fish Health Unit in each 15 BFAR Regional Offices the aquatic animal health service is being performed by both the central fish health officers and the regional fish health officers.

The mandate of the Fish Health Management and Quality Assurance Section (FHMQAS) is to implement official control of entry and spread of disease the residues

[33] http://www.da.gov.ph/index.php/2012-03-27-12-02-11/2012-03-27-13-24-48
[34] E.1b
[35] E.1b

in fish and fishery lies in Republic Act 8550 and its succeeding implementing Fisheries Administrative Orders (FAOs), Fisheries Office Orders (FOOs), and Memorandum Circulars. The FHMQAS is responsible for:

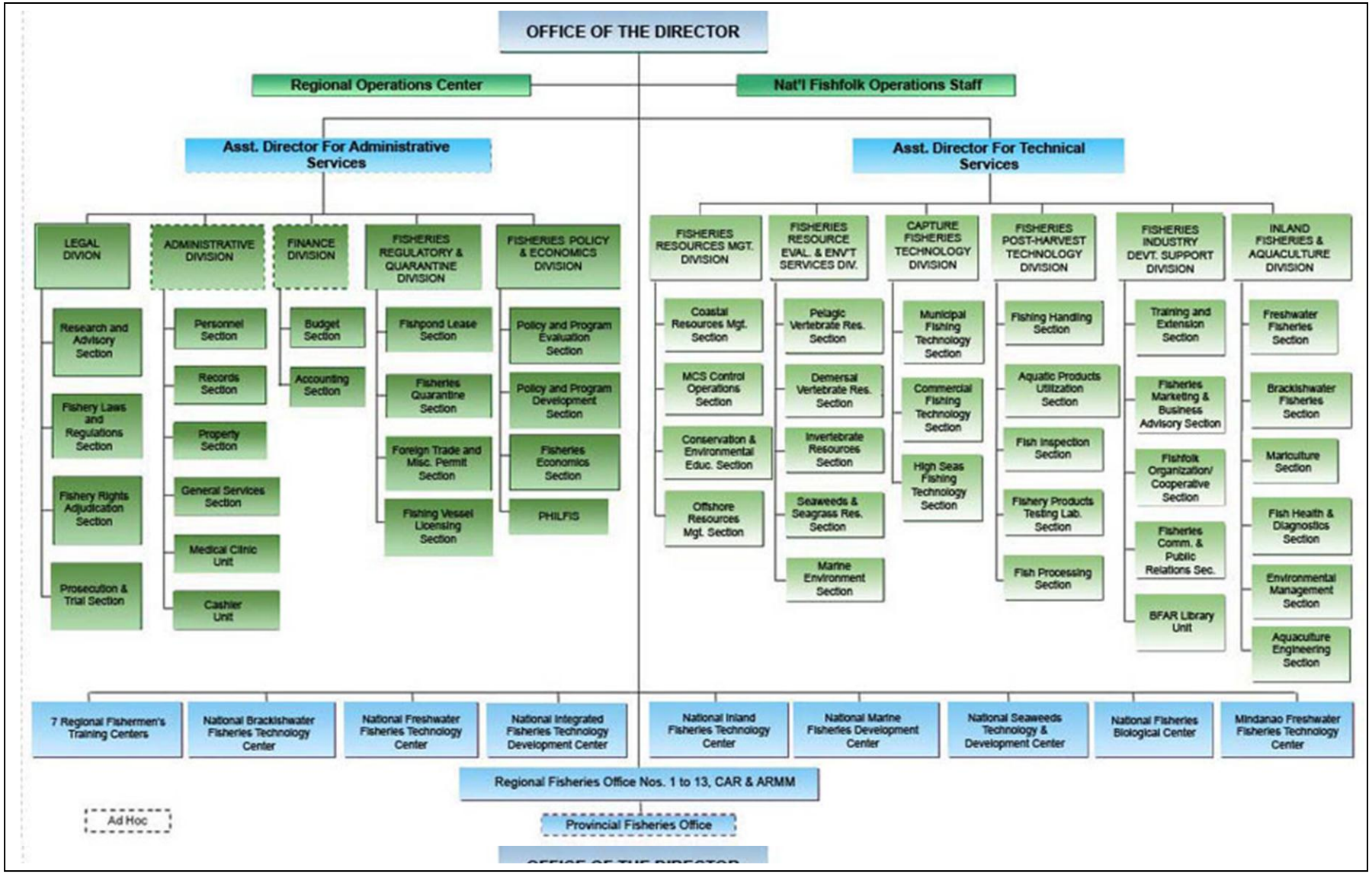
- Preparing -- in coordination with concerned units within BFAR, and other agency in the Department of Agriculture like Bureau of Animal Industry, and Fertilizer and pesticides Authority and the Department of Health -- the national control plans on aquatic animal diseases and residues in aquaculture products;
- Developing and implementing the disease and residue monitoring plan for all aquaculture products;
- Registering aquaculture farms supplying approved establishments;
- Surveying diseases on aquaculture farms;
- Operating a laboratory (the Fish Health Management and Quality Assurrance Laboratory) that can perform analysis in bacteriology (*Vibrio*, *Aeromonas*), parasitology (Protozoan and metazoan parasites), molecular biology (Polymerase Chain Reaction for white spot syndrome virus and koi herpes virus), and water quality (basic water quality parameters like ammonia, oxygen, hydrogen sulphide)

At the regional offices, aquatic animal health management is under the responsibility of **BFAR Regional Directors located in 15 regional offices**. Each has a Fish Health Unit, linked to the central FHMQAS, and quarantine officers, linked to the central quarantine section.

The regional offices have access to the Provincial Fishery Officers who may be technical personnel of the BFAR Regional Offices concurrently assigned to act as PFO for the Local Government Unit. The PFO hired by the local government unit is under the administrative supervision of the elected officials like the Governors.

The shrimp producing area like Bacolod, Negros Occidental requires the services of the laboratory. The farmers formed a cooperative named Negros Prawn Producers Cooperative and developed a laboratory capable of providing aquatic animal health services.

FIGURE 5: Organogram of the Bureau of Fisheries and Aquatic Resources[36]



[36] http://www.bfar.da.gov.ph

After undergoing a series of reorganizations, **BFAR today has ten (10) functional divisions**:

ASSISTANT DIRECTOR FOR ADMINISTRATIVE SERVICES

1. Legal Division;
   - Review joint fishing agreements between Filipino citizens and foreigners who conduct fishing activities in international waters and ensure that such agreements are not contrary to Philippine commitment under international treaties and convention on high seas fishing;
2. Administrative Division;
   - Exercises supervision and control over the operations and management of the Division;
3. Finance Division;
   - Exercises supervision and control over the operations and management of the Division;
4. Fisheries Regulatory and Quarantine Division; and
   - Register and issues licenses for fishing gears used in commercial fishing vessels;
5. Fisheries Planning, Policy and Economics Division.
   - Analyzes industry, economic, institutions and such other related studies on the various aspects of fisheries, to form bases in the formulation and recommendation of appropriate policies and programs for the utilization, management, development, conservation and allocation system of fisheries and aquatic resources;

ASSISTANT DIRECTOR FOR TECHNICAL SERVICES

6. Fishery Resources Management Division;
   - Enforces fisheries laws, rules and regulations on the management and protection of fishery/aquatic resources within the Philippine territorial waters including the exclusive economic zone
7. Capture Fisheries Technology Division
   - Provides over-all technical advisory and support services to the Bureau and higher level management on matters pertaining to capture fisheries/fishing technology;
8. Fisheries Post-harvest Technology Division
   - Assists in the implementation of the utilization of fish/fishery aquatic products in support to the Comprehensive National Fisheries Industry Development Plan;
9. Fisheries Industry Development Support Division; and
10. Inland Fisheries and Aquaculture Division
    - Assist in the preparation and implementation of a National Inland Fisheries and Aquaculture Development and Management Program, Fish Diagnostic and Quarantine System and the Environmental Impact Assessment in coordination with the National Aquaculture Centers and the Fisheries Regional Offices.

THE BFAR FISH HEALTH MANAGEMENT AND QUALITY ASSURANCE LABORATORY (FHMQAS)[37]

The Fish Health Section started out as a joint project of the Bureau of Fisheries and Aquatic Resources (BFAR) and the International Development Research Centre (IDRC) of Canada. The section is currently involved in a lot of activities related to fish health management, quarantine, health management training and diagnostic activities.

Mission and Responsibilities

To provide laboratory and diagnostic services to the various aquaculture industries as well as provide basic training on fish health for the public and private sector.

Mandates of the Fish Health Section

The Fish Health Section of the Bureau of Fisheries and Aquatic Resources is mainly responsible on matters relating to aquatic animal health in the Philippines. The section is mandated to do the following:

- Assist in the implementation of national diagnostic and quarantine system for the movement of living aquatic animals;
- Formulate guidelines to strengthen the national program on aquatic animal health certification and quarantine procedures;
- Recommend to the Fisheries Regulatory and Quarantine Division (FRQD) policies and procedures in coordination with the concerned divisions, regulations on aquatic animal health certifications and quarantine procedures;
- Render emergency diagnostic and technical assistance on fish disease diagnoses and recommend prevention control and treatment measures;
- Monitor / assess health status of stocks in selected fish and other aquatic resource farms in the Philippines;
- Provide standards and set directions to different regional fish health satellite laboratories;
- Serve as repository of information on fish disease;
- Establish centralized quarantine facilities for imported live aquatic animals;
- Develop expertise in the field of fish disease diagnosis specifically on parasitology, bacteriology, histopathology and immunology in support to diagnostic undertakings;
- Conduct national specialized training programs such as fish health management for government fishery biologists, extension workers, fish farmers and other interested individuals;
- Develop linkages with international and national organizations working on fish health for information exchange and human resource development purposes;
- Represent the Philippine government in international meetings, conferences, seminars, workshops on matters pertaining to fish health and live fish quarantine, as directed by management.

The BFAR has **eight (8) Fisheries Technology Centers** being responsible for a wide range of research, technical support, extension and development services.

[37] http://www.bfar.da.gov.ph/pages/Services/tab1/tab1-fishhealthmanagement.html

LEGISLATION APPLICABLE TO THE FISHERIES SECTOR IN THE PHILIPPINES[38],[39]

Presidential Decree No. 704

Presidential Decree No. 704, otherwise known as the **Fisheries Decree of 1975,** was issued on May 16, 1975 and **became the basic law on fishing and/or fisheries**, the salient features of which are:

- To accelerate and promote the integrated development of the fishery industry and keep the fishery resources in optimum productive condition through proper conservation and protection;
- To promote the organization and assistance and help integrate activities of persons and entities of the industry so that the nation may achieve the maximum economic utilization of its fishery resources;
- To encourage the exportation of fish so that the fishery industry may contribute positively to the development of the national economy;
- The BFAR assumed jurisdiction and responsibility in the management, conservation, development, production, utilization and disposition of fishery and aquatic resources, except municipal waters under the municipal governments concerned;
- Amendment of composition of the Fishery Industry Development Council (FIDC);
- Banned bangus fry exportation except those of other species, but only after satisfaction of local fishing industry needs;
- Allowed person and entities to enter into charter contracts, lease or lease-purchase agreements with any foreign person or entity, or contracts for financial, technical or other forms of assistance regarding the various phases of the fishing industry;
- That BFAR shall identify and set aside public lands to be subdivided into family-size fishponds to be leased in accordance with guidelines established by the FIDC;
- Named certain banking and lending institutions to grant loans to eligible borrowers of the fishery industry; and
- Financing of municipal and/or small-scale fishing.

Fisheries Code Republic Act 8550 - THE PHILIPPINE FISHERIES CODE OF 1998

"An act providing for the development, management and conservation of the fisheries and aquatic resources, integrating all laws pertinent thereto, and for other purposes."

The **Bureau of Fisheries and Aquatic Resources (BFAR**) is the government agency responsible for the development, improvement, management and conservation of the country's fisheries and aquatic resources. It was reconstituted as a line bureau by virtue of Republic Act No. 8550 (Philippine Fisheries Code of 1998). The bureau is under the Department of Agriculture.

As a line bureau, BFAR has the following functions:

- Prepare and implement a comprehensive National Fisheries Industry Development Plan;
- Issue licenses for the operation of commercial fishing vessels;
- Issue identification cards free of charge to fishworkers engaged in commercial fishing;

[38] http://www.bfar.da.gov.ph/pages/Legislation/legislations.html
[39] E.15

- Monitor and review joint fishing agreements between Filipino citizens and foreigners who conduct fishing activities in international waters and ensure that such agreements are not contrary to Philippine commitment under international treaties and convention on fishing in the high seas;
- Formulate and implement a Comprehensive Fishery Research and Development Program, such as, but not limited to, sea farming, sea ranching, tropical / ornamental fish and seaweed culture, aimed at increasing resource productivity improving resource use efficiency, and ensuring the long term sustainability of the county's fishery and aquatic resources;
- Establish and maintain a comprehensive Fishery Information System;
- Provide extensive development support services in all aspects of fisheries production, processing and marketing;
- Provide advisory services and technical assistance on the improvement of quality of fish from the time it is caught (i.e., on board fishing vessels, at landing areas, fish markets, to the processing plants and to the distribution and marketing chain);
- Coordinate efforts relating to fishery production undertaken by the primary fishery producers, LGUs, Fisheries and Aquatic Resources Management Councils (FARMCs), fishery and organization / cooperatives;
- Advise and coordinate with LGUs on the maintenance of proper sanitation and hygienic practices in fish markets and fish landing areas;
- Establish a corps of specialists in collaboration with the Department of National Defense, Department of the Interior and Local Government and Department of Foreign Affairs for the efficient monitoring, control and surveillance of fishing activities within Philippine territorial waters and provide the necessary facilities, equipment and training thereof;
- Implement and inspection system for import and export of fishery / aquatic products and fish processing establishments consistent with international standards to ensure product quality and safety;
- Coordinate with LGUs and other concerned agencies for the establishment of productivity-enhancing and market development programs in fishing communities to enable women to engage in other fisheries / economic activities and contribute significantly to development efforts;
- Enforce all laws, formulate and enforce all rules and regulations governing the conservation and management of fishery resources, except in municipal waters and to settle conflicts of resource use and allocation in consultation with the NFARMC, LGUs and local FARMCs;
- Develop value-added fishery products for domestic consumption and export;
- Recommend measures for the protection / enhancement of the fishery industries;
- Assist the LGUs in developing their technical capability in the development, management, regulation conservation and protection of the fishery resources;
- Formulate rules and regulations for the conservation and management of straddling fish stocks and highly migratory fish stocks; and
- Perform such other related functions which shall promote the development, conservation, management protection and utilization of fisheries and aquatic resources.

The new Constitution of 1986 gave prominence to the marine wealth of the country over all the other natural resources by reserving its use and enjoyment exclusively to Filipino citizens.

The relevant provisions of the new Constitution of the Philippines are as follows:

- Article XII, Sec. 2 – “The State shall protect the nation’s marine wealth in its

archipelagic waters, territorial sea, and exclusive economic zone, and reserve its use and enjoyment exclusively to Filipino citizens."

- Article XII, Sec. 7 – "*The State shall protect the rights of subsistence fishermen, especially of local communities, to the preferential use of the communal marine and fishing resources, both inland and offshore. It shall provide support to such fishermen through appropriate technology and research, adequate financial, production and marketing assistance and other services. The State shall also protect, develop and conserve such resources. The protection shall extend to offshore fishing grounds or subsistence fishermen against foreign intrusion. Fishworkers shall receive a just share from their labor in the utilization of marine and fishing resources*."

II.3.C Animal disease occurrence

Information on aquatic animal disease occurrence is supplied six-monthly to the OIE WAHID database by the OIE Focal Point for Aquatic Animals, based at the BFAR and the information transmitted via the National OIE Delegate at the Directorate of Veterinary Services of the Department of Agriculture.

Table 12. List of aquatic animal diseases[40], based on the OIE list:

Notifiable or reportable to the Official AAHS (Administrative Order No. 01 Series of 2012- Declaring the List of Notifiable Animal Diseases)	List of reportable diseases present in the country
Fish Diseases 1. Epizootic haematopoeitic necrosis 2. Epizootic ulcerative syndrome 3. Infection with *Gyrodactylussalaris* 4. Infectious haematopoeitic necrosis 5. Infectious salmon anaemia 6. Koi herpesvirus 7. Red sea bream iridoviral disease 8. Spring viraemia of carp 9. Viral haemorrhagicsepticaemia	**Fish Diseases** 1. Epizootic ulcerative syndrome
Notifiable or reportable to the Official AAHS (Administrative Order No. 01 Series of 2012- Declaring the List of Notifiable Animal Diseases)	**List of reportable diseases present in the country**
Crustacean diseases 1. Crayfish plague (*Aphanomycesastaci*) 2. Infectious hypodermal haematopoeitic necrosis 3. Infectious myonecrosis 4. Necrotisinghepatopancreatitis 5. Taura syndrome 6. White spot virus 7. White tail disease 8. Yellowhead disease	**Crustacean diseases** 1. Infectious hypodermal hematopoietic Necrosis (IHHN) 2. White spot virus 3. Yellowhead disease
Mollusc diseases 1. Infection with abalone herpes-like virus 2. Infection with *Bonamiaexitiosa* 3. Infection with *Bonamiaostrea* 4. Infection with *Marteiliarefringes* 5. Infection with *Perkinsusmarinus* 6. Infection with *Perkinsusolseni* 7. Infection with *Xenohaliotiscaliforniensis*	**Mollusc diseases**

[40] E.1c

Table 13. Aquatic Animal Disease status of the Philippines[41]

The following table lists notifiable aquatic diseases reported to the OIE for 2011.

✓ Notifiable ✗ No

Aquatic animal diseases present in the Country

	Domestic		Wild	
Disease	**Notifiable**	**Status**	**Notifiable**	**Status**
Infectious hypodermal and haematopoietic necrosis	✓	Clinical Disease	✗	Noinformation
White spotdisease	✓	Clinical Disease	✗	Noinformation

Aquatic animal diseases never reported

Disease	Notifiable	Type ofsurveillance
Crayfishplague (Aphanomycesastaci)	✗	
Epizoot. haematopoieticnecrosis	✗	
Gyrodactylosis (Gyrodactylussalaris)	✗	
Infect. haematopoieticnecrosis	✗	
InfectionwithBonamiaexitiosa	✗	
InfectionwithBonamiaostreae	✗	
InfectionwithMarteiliarefringens	✓	
InfectionwithPerkinsusmarinus	✗	
InfectionwithPerkinsusolseni	✓	
InfectionwithXenohaliotiscaliforniensis	✗	
Infectiousmyonecrosis	✓	General Surveillance
Infectioussalmonanaemia	✗	
Koiherpesvirusdisease	✓	General andtargetedsurveillance
Necrotisinghepatopancreatitis	✗	
Spring viraemiaofcarp	✓	General andtargetedsurveillance
Taurasyndrome	✓	General Surveillance

[41] http://www.oie.int/wahis_2/public/wahid.php/Countryinformation/Animalsituation

Tetrahedralbaculovirosis (Baculoviruspenaei)	✗	
Viral haemorrhagicsepticaemia	✓	
White taildisease	✓	General Surveillance

Aquatic animal diseases not reported in 2011

	Domestic			Wild		
Disease	**Notifiable**	**Last occurrence**	**Surveillance**	**Notifiable**	**Last occurrence**	**Surveillance**
Epizooticulcerativesyndrome	✓	10/2002	General Surveillance	✗	10/2002	General Surveillance
Spherical baculovirosis (Penaeusmonodon-type baculovirus)	✗	08/2007		✗	08/2007	
Yellow headdisease	✓	07/1999	General Surveillance	✗	07/1999	General Surveillance

II.4 Organisation of the evaluation

II.4.A Timetable of the mission

Appendix 3 provides a list of persons met; Appendix 4 provides the timetable of the mission and details of the facilities and locations visited by the OIE-PVS Team and Appendix 5 provides the international air travel itinerary of team members.

The Appendix 5 indicates the travel undertaken by the assessors, air travel being indicated on the map (Figure 6) below.

II.4.B Categories of sites and sampling for the evaluation

Given the size of the Philippines with more than 7 000 islands, of which around 1 000+ are inhabited, occupying an area that stretches for 1,850 kilometres from about the fifth to the twentieth parallels north latitude, heavy monsoon rains and the possibility of active volcanic activities, sampling sites for the evaluation had to be limited given the available time for the mission.

In order to assess epidemiological surveillance and public-private stakeholder relationships a number of visits were conducted at BFAR National and Regional fisheries offices and laboratories, freshwater and coastal fisheries, broodstock aquaculture and commercial aquaculture enterprises, fisheries processing establishments, export and import border control stations and an aquatic animal feed mill.

In order to prevent bias in the selection of sites to be visited, the following criteria were applied *inter alia*:

- zone with a province that presents a particular sanitary risk – the 2 international sea ports of Manila and Cebu; the International Airport in Manila
- major aquaculture activities in areas that have high density animal populations / major processors.- tilapia farms in Region 4B (Taal) and

Region 3 (Pampamga); commercial aquaculture farms in Lake Taal and Bacolod (shrimp)

- different levels of fisheries production and diverse fisheries populations – freshwater tilapia, shrimp brackish water and milkfish marine aquaculture, marine ornamental fish export facilities and commercial shrimp export facilities .

Appendix 4 provides a detailed list of sites visited and meetings conducted.

PART III: RESULTS OF THE EVALUATION AND GENERAL RECOMMENDATIONS

This evaluation identifies the strengths and weaknesses of the veterinary services, and makes general recommendations.

FUNDAMENTAL COMPONENTS	
1.	HUMAN PHYSICAL AND FINANCIAL RESOURCES
2.	TECHNICAL AUTHORITY AND CAPABILITY
3	INTERACTION WITH INTERESTED PARTIES
4.	ACCESS TO MARKETS

Veterinary services are recognised by the international community and by OIE Members as a '**global public good**'. Accordingly, it is essential that each country acknowledges the importance of the role and responsibilities of its veterinary services and gives them the human and financial resources needed to fulfil their responsibilities.

This OIE-PVS Evaluation examined each critical competency under the 4 fundamental components, listed strengths and gaps where applicable, and established a current level of advancement for each critical competency. Evidence supporting this level is listed in Appendix 6. General recommendations were provided where relevant.

The current level of advancement for each critical competency is shown in cells shadowed in grey (15%) in the table.

III.1 Fundamental component I: Human, physical and financial resources

This component of the evaluation concerns the institutional and financial sustainability of the VS as evidenced by the level of professional/technical and financial resources available and the capacity to mobilize these resources. It comprises fourteen critical competencies:

Critical competencies:

Section I-1	**Professional and technical staffing of the Veterinary Services or Aquatic Animal Health Services**
	A. Veterinary or aquatic animal health professionals (university qualification)
	B. Aquatic animal health professional and other technical personnel (non university level qualification)
Section I-2	**Competencies of veterinarians or aquatic animal professionals, and other technical personnel**
	A. Professional competencies of veterinary or aquatic animal health professionals (university qualification) including the OIE Day 1 competencies for veterinarians
	B. Competencies of aquatic animal health professional and other technical personnel (non university level qualification)
Section I-3	**Continuing education**
Section I-4	**Technical independence**
Section I-5	**Stability of structures and sustainability of policies**
Section I-6	**Coordination capability of the Veterinary Services or Aquatic Animal Health Services**
	A. Internal coordination (chain of command)
	B. External coordination
Section I-7	**Physical resources**
Section I-8	**Operational funding**
Section I-9	**Emergency funding**
Section I-10	**Capital investment**
Section I-11	**Management of resources and operations**

***Aquatic Code* references:**

Points 1-7, 9 and 14 of Article 3.1.2. on Fundamental principles of quality: Professional judgement / Independence / Impartiality / Integrity / Objectivity / Aquatic animal health legislation and regulations / General organisation / Procedures and standards / Human and financial resources.

Terrestrial Code references:

Point 1 of Article 3.2.2. on Scope.

Points 1 and 2 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services.

Point 2 of Article 3.2.4. on Evaluation criteria for quality system: "Where the Veterinary Services undergoing evaluation… than on the resource and infrastructural components of the services".

Article 3.2.5. on Evaluation criteria for human resources.

Points 1-3 of Article 3.2.6. on Evaluation criteria for material resources: Financial / Administrative / Technical.

Points 3 and Sub-point d) of Point 4 of Article 3.2.10. on Performance assessment and audit programmes: Compliance / In-Service training and development programme for staff.

Article 3.2.12. on Evaluation of the veterinary statutory body.

Points 1-5 and 9 of Article 3.2.14. on Organisation and structure of Veterinary Services / National information on human resources / Financial management information / Administration details / Laboratory services / Performance assessment and audit programmes.

	Levels of advancement	
I-1 Professional and technical staffing of the Veterinary Services (VS) or Aquatic Animal Health Services *The appropriate staffing of the VS or AAHS to allow for veterinary and aquatic animal health professional and technical functions to be undertaken efficiently and effectively.* **A. Veterinary or aquatic animal health professionals (university qualification)**	1.	The majority of veterinary and aquatic animal health professional positions are not occupied by appropriately qualified personnel.
	2.	**The majority of veterinary and aquatic animal health professional positions are occupied by appropriately qualified personnel at central and state / provincial levels.**
	3.	The majority of veterinary and aquatic animal health professional positions are occupied by appropriately qualified personnel at local (field) levels.
	4.	There is a systematic approach to defining job descriptions and formal appointment procedures for *veterinarians* and aquatic animal health professionals.
	5.	There are effective management procedures for performance assessment of *veterinarians* and aquatic animal health professionals.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1b; EM.4; PP.3.

Findings:

BFAR has a total personnel complement of 1296 positions, with 920 filled. In addition there are 22 positions funded and available for appointment. The remainder of the vacancies are unfunded, only to be filled if funding is made available.

The AAHS has at present 120 filled positions, of which only 41 (or 30%) are employed on a permanent basis and 79 (or 70%) being employed as so-called “job orders”, being appointed on a service contract without security of tenure.

The Team notes that this high percentage of temporary or contract personnel negatively impacts on the stability and permanency of aquatic animal health professionals such as veterinarians.

At present, BFAR is undergoing rationalization of the personnel. This will result in more positions being made available for permanent appointment.

Designated Fish Health Officers (FHO)are rendering AAHS, whereas Provincial Fishery Officers (PFO) are administratively under the jurisdiction of the Local Government Units (LGUs). Some of the latter are functioning as control officers for implementing regulatory control for the national transboundary movement of fish (including live fish) and fishery products.

A significant amount of unspent funding was returned to treasury in the 2011 financial year due to inability to fill positions with appropriately qualified staff.

The available personnel are subjected to multiple appointment human resource management techniques, complete with detailed job descriptions. The organisation structure is not aligned with the available skilled personnel e.g. one person is the head of a section and also responsible for 3 additional, disconnected disciplines with varying responsibilities and geographical separation.

The payment of overtime has been approved for selected staff for the 2013 financial year, however without the necessary budget allocations. Any overtime has to be paid out of savings made from other budget votes/items.

Table 14. Personnel deployed in the Aquatic Animal Health Services (BFAR) 2013

REGION	Permanent Positions			Total	"Job Order" Positions			Total	ALL TOTAL
	DVM*	College degree	Admin. staff		DVM*	College degree	Admin. staff		
Central	2	5	1	**8**	6	10	4	**20**	**28**
REGION 1	0	3	0	**3**	0	2	0	**2**	**5**
REGION 2	0	4	0	**4**	2	3	0	**5**	**9**
REGION 3	0	3	0	**3**	1	3	0	**4**	**7**
REGION 4A	0	10	0	**10**	1	13	0	**14**	**24**
REGION 4B	0	0	1	**1**	0	0	0	**0**	**1**
REGION 5	0	1	0	**1**	1	3	0	**4**	**5**
REGION 6	0	2	0	**2**	0	5	0	**5**	**7**
REGION 7	0	1	0	**1**	1	1	0	**2**	**3**
REGION 8	0	2	0	**2**	1	2	0	**3**	**5**
REGION 9	0	1	0	**1**	0	2	0	**2**	**3**
REGION 10	0	1	0	**1**	1	1	0	**2**	**3**
REGION 11	0	1	0	**1**	0	1	1	**2**	**3**
REGION 12	0	1	0	**1**	0	1	0	**1**	**2**
CARAGA	0	1	0	**1**	0	7	0	**7**	**8**
ARMM	0	1	0	**1**	0	3	1	**4**	**5**
CAR	0	0	0	**0**	0	2	0	**2**	**2**
TOTAL	**2**	**37**	**2**	**41**	**14**	**59**	**6**	**79**	**120**

* Doctor of Veterinary Medicine

Strengths:

- The Team notes the dedicated commitment of BFAR personnel in rendering the required services within their responsibilities. Personnel have a broad experience-base of core functions due to multi-tasking appointments.

Weaknesses:

- Permanent staff are very limited in numbers and a few key staff carry most of the corporate knowledge, resulting in a high risk of being lost if such staff find alternative employment
- Only 16 out of the total personnel establishment are veterinarians (13%) but only 2 are permanently appointed (5% of the total permanent workforce)

Recommendations

- The Team was informed about the envisaged BFAR structural re-organisation process and recommends that the **need for an increased number of permanently employed aquatic animal health professionals be addressed as a priority**.

	Levels of advancement	
I-1 Professional and technical staffing of the Veterinary Services (VS) or Aquatic Animal Health Services *The appropriate staffing of the VS or AAHS to allow for veterinary and aquatic animal health professional and technical functions to be undertaken efficiently and effectively..* **B. Aquatic animal health professional and other technical personnel (non university level qualification)**	1.	The majority of aquatic animal health professionals and other technical positions are not occupied by personnel holding appropriate qualifications.
	2.	The majority of aquatic animal health professionals and other technical positions at central and state / provincial levels are occupied by personnel holding appropriate qualifications.
	3.	The majority of aquatic animal health professionals and other technical positions at local (field) levels are occupied by personnel holding appropriate qualifications.
	4.	The majority of aquatic animal health professionals and other technical positions are effectively supervised on a regular basis.
	5.	There are effective management procedures for formal appointment and performance assessment of aquatic animal health professionals and other technical personnel.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1b; EM.4; PP.3.

Findings:

The Team noted that BFAR employ adequate staff with relevant fisheries and aquaculture qualifications, however, as the majority are graduates are holding a college BSc and higher degree, they cannot be assessed for this criterion and are placed in CC I-1A.

Very few personnel holding non-university level qualifications are employed to render administrative services.

Personnel at local/municipal level are employed by the Local Government Units and the Team were unable to assess staffing levels within municipal jurisdictions.

The Team is not able to provide a level of advancement for this CC.

	Levels of advancement
I-2 Competencies of veterinarians or aquatic animal health professionals, and other technical personnel *The capability of the VS or AAHS to carry out their veterinary or aquatic animal health professional practices and technical functions; measured by the qualifications of their personnel.* **A. Professional competencies of veterinary or aquatic animal health professionals (university qualification) including the OIE Day 1 competencies for veterinarians**	1. The *veterinarians*' or aquatic animal healthprofessionals' practices, knowledge and attitudes are of a variable standard that usually allow for elementary clinical and administrative activities of the VS or AAHS.
	2. The *veterinarians*' or aquatic animal health professionals' practices, knowledge and attitudes are of a uniform standard that usually allow for accurate and appropriate clinical and administrative activities of the VS or AAHS.
	3. The *veterinarians*' or aquatic animal health professionals' practices, knowledge and attitudes usually allow undertaking all professional/technical activities of the VS or AAHS (e.g. epidemiological surveillance, early warning, public health, etc.).
	4. The *veterinarians*' or aquatic animal health professionals' practices, knowledge and attitudes usually allow undertaking specialized activities as may be needed by the VS or AAHS.
	5. The *veterinarians*' or aquatic animal health professionals' practices, knowledge and attitudes are subject to regular updating, international harmonisation or evaluation.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1b; BFAR and PRC website

Findings:

BFAR recognizes the veterinary courses provided by existing colleges and universities who are registered by the Commission on Higher Education under the system of registration by the Philippine Regulatory Commission.

Although the appointment and hiring of registered veterinarians are prioritized to work on the field of aquatic disease diagnosis, the Team noted that only 2 out of 41 permanent AAHS personnel and only 14 of the non-permanent ("job orders") personnel are qualified veterinarians.

The non-veterinarians employed by the AAHS of BFAR are technical personnel holding college degrees obtained from a wide spectrum of colleges, with qualifications like BSc Fisheries to BSc Animal Husbandry; Biology; Chemistry; Chemical Engineering etc.

The Fish Health Officers (FHOs) prior to designation are required to undergo training on fish health which is conducted by the FHMQAS. This in-service training is handled by the core technical personnel having the necessary expertise on the relevant field of activity.

The FHMQAS senior personnel are also acting as resource persons to workshops/forum/trainings conducted by the regional offices and other government and non-government organizations

The South East Asia Fisheries Development Center (SEAFDEC) also provides training on fish health. Such training is recognized and recommended by the AAHS for fish health officers. Several FHOs have undergone training provided by SEAFDEC.

The Team was informed that international training opportunities for aquatic animal health are available to BFAR/AAHS personnel provided by organisations such as NACA, FAO, the European Union and the United States of America.

The Team noted that pre-graduate curricula of veterinary schools in the Philippines contain little, if any, training in aquatic animal health, resulting in the **absence of "Day 1-competency" in aquatic animal health.** Likewise the curriculum for the 4-year course in BSc Fisheries contains only an elective course in Health Management in Aquaculture.

All veterinary graduates from the different veterinary colleges/schools in the Philippines are required to sit a board examination of the Professional Regulatory Board of Veterinary Medicine (PRBVM) under the umbrella of the Profession Regulatory Commission (PRC). The Team was informed that the **pass rate for the examination held in 2012 was only 38%.** According to information provided to the Team less than 5% of the examination has some relevance to aquatic animal health. In addition the Team was informed that at present there exists no harmonised veterinary training curriculum between the many Colleges of Veterinary Medicine and Science throughout the Philippines, which may a very important cause for the high failure rates in the annual PRBVM examinations

Non-veterinary qualification holders in BSc Fisheries, seeking employment in the public service (BFAR), are required to take a licensing examination conducted by the PRC, with payment of an annual renewal fee to maintain the licence. Although the licensing examination includes some technical competence examination, the team found no evidence of inclusion of aquatic animal health.

Strengths:

- Requirement for the licensing of veterinarians to pass the PRBVM examination.

Weaknesses:

- The virtual absence of training in aquatic animal health at veterinary and technical level, with no “Day-1” competency

Recommendations

- Address as a high priority the major deficiency in aquatic animal health training with all relevant stakeholders, primarily with universities and colleges offering pre-graduated training for veterinarians and other professionals

	Levels of advancement
I-2 Competencies of veterinarians or aquatic animal health professionals, and other technical personnel *The capability of the VS or AAHS to carry out their veterinary or aquatic animal health professional practices and technical functions; measured by the qualifications of their personnel.* **B. Competencies of aquatic animal health professional and other technical personnel (non university level qualification)**	1. The majority of aquatic animal health professional and other technical personnel have no formal entry-level training.
	2. The training of aquatic animal health professional and other technical personnel is of a variable standard and allows the development of only basic competencies.
	3. The training of aquatic animal health professional and other technical personnel is of a uniform standard that allows the development of only basic specific competencies.
	4. The training of aquatic animal health professional and other technical personnel is of a uniform standard that allows the development of some advanced competencies.
	5. The training of aquatic animal health professional and other technical personnel is of a uniform standard and is subject to regular evaluation and/or updating.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1b

Findings:

The Team noted that BFAR employ adequate personnel with relevant fisheries and aquaculture qualifications, however, as the majority are graduate technical personnel, they cannot be assessed for this criterion and are placed in CC I -2A.

Very few personnel holding non-university level qualifications are employed to render administrative services.

Personnel at local/municipal level are employed by the Local Government Units and the team were unable to assess staffing levels within municipal jurisdictions.

The Team is not able to provide a level of advancement for this CC

I-3 Continuing education (CE)[42] *The capability of the VS or AAHS to maintain and improve the competence of their personnel in terms of relevant information and understanding; measured in terms of the implementation of a relevant training programme.*	Levels of advancement
	1. The VS or AAHS have no access to veterinary, professional or technical CE.
	2. The VS or AAHS have access to CE (internal and/or external programmes) on an irregular basis but it does not take into account needs, or new information or understanding.
	3. The VS or AAHS have access to CE that is reviewed annually and updated as necessary, but it is implemented only for some categories of the relevant personnel.
	4. The VS or AAHS have access to CE that is reviewed annually and updated as necessary, and it is implemented for all categories of the relevant personnel.
	5. The VS or AAHS have up-to-date CE that is implemented for all relevant personnel and is subject to regular evaluation of effectiveness.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1b; PP.11 & 12.

Findings:

The Team was provided with detailed information on the high number of training courses offered annually to the BFAR personnel.

The PRBVM, together with the Philippine Veterinary Medical Association (PVMA) is considering the introduction of Continuing Education courses which may eventually become compulsory to be able to maintain the annual licencing.

Examples of CE courses for 2012 are as follows:

Date	Subject	Venue	Number of Participants
March 6-8, 2012	Participation in a training workshop on the estimation of measurement uncertainty for antibiotic residue analyses	FHMQAL	
June 3-9, 2012	FOO # 152 – Participation in the back-to-back Training Workshop of the Fish Health Network on a) Seaweed Taxonomical Identification of Philippine Eucheumatoids and b) Good Aquaculture Practices (GAqP)	Palawan	38
October 15-20, 2012	Participation to the Workshop of the BFAR Fish Health Network for the Implementation of Sanitary and Phytosanitary (SPS) Requirements for the Export/Transboundary of Live Aquatic Animals	Clark Field, Pampanga	50
December 10-13, 2012	Training Workshop of Extension Officers and Fish Health Officers on Good Aquaculture Practices (GAqP)	Subic International Hotel, Subic, Zambales	52
December 14-15, 2012	FOO # 347 – Participation to the Reporting and Planning Workshop of the Fish Health Network	Subic International Hotel, Subic, Zambales	34

Ad-hoc training courses and workshops appear to be donor-driven with a small number of subject-driven BFAR-based short courses and workshops. There are no courses offered to staff by BFAR that target AAH.

The PVMA has a number of recognized speciality groups, with at present issues regarding aquatic animal health being handled under the Public Health & Wildlife Group.

[42] Continuing education includes Continuous Professional Development (CPD) for veterinary, or aquatic animal health professional and other technical personnel.

The PRCVM and PVMA are aware of the urgent need to address aquatic animal health issues through CE courses.

Weaknesses:

- Virtual absence of focussed CE in AAH.

Recommendations

Widen the scope of current CE courses to provide for special focus on aquatic animal health in accordance with OIE Code standards

	Levels of advancement	
I-4 Technical independence *The capability of the VS or AAHS to carry out their duties with autonomy and free from commercial, financial, hierarchical and political influences that may affect technical decisions in a manner contrary to the provisions of the OIE (and of the WTO SPS Agreement where applicable).*	1.	The technical decisions made by the VS or AHHS are generally not based on scientific considerations.
	2.	The technical decisions take into account the scientific evidence, but are routinely modified to conform to non-scientific considerations.
	3.	The technical decisions are based on scientific evidence but are subject to review and possible modification based on non-scientific considerations.
	4.	**The technical decisions are made and implemented in general accordance with the country's OIE obligations (and with the country's WTO SPS Agreement obligations where applicable).**
	5.	The technical decisions are based only on scientific evidence and are not changed to meet non-scientific considerations.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.14 & 15.

Findings:

The Team noted the well regulated public service of the Philippines, with high level attention to address misconduct through commercial, financial and undue political influence affecting public service rendering. Public Service Regulations address in detail all aspects relating to transparent and effective service delivery and include aspects such as compulsory annual declaration of assets and liabilities by public servants.

The rendering of after-office services to private clients is allowed within limits determined by the Public Service Regulations.

PRCVM members are appointed directly by the Office of the President. The decisions of the PRCVM regarding licensing and the results of examinations are not influenced by political requests or demands.

Strengths:

- Well regulated Civil Service

	Levels of advancement	
I-5 Stability of structures and sustainability of policies *The capability of the VS or AAHS structure and/or leadership to implement and sustain policies over time.*	1.	Substantial changes to the organisational structure and/or leadership of the public sector of the VS or AAHS frequently occur (e.g. annually) resulting in lack of sustainability of policies.
	2.	Sustainability of policies is affected by changes in the political leadership and/or the structure and leadership of VS or AAHS.
	3.	**Sustainability of policies is not affected or is slightly affected by changes in the political leadership and/or the structure and leadership of VS or AAHS.**
	4.	Policies are sustained over time through national strategic plans and frameworks and are not affected by changes in the political leadership and/or the structure and leadership of VS or AAHS.
	5.	Policies are sustained over time and the structure and leadership of the VS or AAHS are stable. Modifications are based on an evaluation process, with positive effects on the sustainability of policies.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.14 & 15, E.20; EM.3.

Findings:

BFAR policies are centrally formulated and implemented

Changes in political leadership seem not to affect unduly the capability of BFAR/AAHS to render their services in a sustainable manner.

The Bureau of Fisheries and Aquatic Resources (BFAR) is the government agency responsible for the development, improvement, management and conservation of the country's fisheries and aquatic resources. It was established in 1947 and reconstituted as a line bureau by virtue of Republic Act No. 8550 (Philippine Fisheries Code of 1998) in 1988. The bureau is under the Department of Agriculture. The team noted there has been no change in the organisation due to political influence i.e. the Team was not made aware of any constraints within this context. The Director is a political appointment, all other staff are appointed according to public service rules and provisions.

The Team noted that the current and proposed new structure addresses mainly administrative organisational issues for improved service rendering, not resulting in major changes which would negatively impact on the BFAR capability to implement and sustain its policies.

At senior managerial level of BFAR there is good stability of tenure, with an overall time of service being 10 years+.

	Levels of advancement
I-6 Coordination capability of the Veterinary Services or AAHS **A. Internal coordination (chain of command)** *The capability of the VS or AAHS to coordinate its resources and activities (public and private sectors) with a clear chain of command, from the central level to the field level of the VS or AAHS in order to implement all national activities relevant for OIE Codes (i.e. surveillance, disease control and eradication, food safety and early detection and rapid response programmes).*	1. There is no formal internal coordination and the chain of command is not clear.
	2. There are internal coordination mechanisms for some activities but the chain of command is not clear.
	3. There are internal coordination mechanisms and a clear and effective chain of command for some activities.
	4. There are internal coordination mechanisms and a clear and effective chain of command at the national level for most activities.
	5. There are internal coordination mechanisms and a clear and effective chain of command for all activities and these are periodically reviewed/audited and updated.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1b; PP.2 & 3.

Findings:

At the regional offices, aquatic animal health management is under the responsibility of BFAR Regional Directors located in 15 regional offices. Each has a Fish Health Unit, linked to the central FHMQAS, and quarantine officers, linked to the central quarantine section.

The regional offices have access to the Provincial Fishery Officers who may be technical personnel of the BFAR Regional Offices concurrently assigned to act as PFO for the Local Government Unit. The PFO hired by the local government unit is under the administrative supervision of the elected officials like the Governors.

Aquatic Animal Health is implemented by the FHMQAS in coordination with the 15 BFAR Regional Offices. The regional Directors have full responsibility over their areas of jurisdiction. However, matters of policy-determining nature still lie under the jurisdiction of the Bureau Director. Please see Figures no.4 and 5

National and Regional Fish Health Officers:

- Register aquaculture farms;
- Monitor the disease occurrences in the registered farm and survey disease report and render technical assistance to fish farmers;
- Report any unusual disease outbreaks to FHMQAS
- Conduct surveillance and monitoring of aquatic animal feeds, veterinary drugs and products in their areas of responsibility;
- Recommend regulatory actions on any violations on policies and guidelines on the registration, manufacture, distribution, and usage of aquatic animal feeds.

Regional Fish Health Officers regularly coordinate with the officers of the Central FHMQAS in the implementation of the official program, including disease, residue monitoring. Reports are also being submitted to the Central FHMQAS for consolidation and analysis.

Strengths:

BFAR has a clear and functional chain of command from central down to regional and local level of administration.

I-6 Coordination capability of the Veterinary Services or AAHS **B. External coordination** *The capability of the VS or AAHS to coordinate its resources and activities (public and private sectors) at all levels with other relevant authorities as appropriate, in order to implement all national activities relevant for OIE Codes (i.e. surveillance, disease control and eradication, food safety and early detection and rapid response programmes).* *Relevant authorities include other ministries and Competent Authorities, national agencies and decentralised institutions.*	Levels of advancement
	1. There is no external coordination.
	2. There are informal external coordination mechanisms for some activities, but the procedures are not clear and/or external coordination occurs irregularly.
	3. There are formal external coordination mechanisms with clearly described procedures or agreements for some activities and/or sectors.
	4. There are formal external coordination mechanisms with clearly described procedures or agreements at the national level for most activities, and these are uniformly implemented throughout the country.
	5. There are national external coordination mechanisms for all activities and these are periodically reviewed and updated.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1b: E.14; E.15; EM3.

Findings:

The control of the veterinary medicines and biological on fish and fishery product lies under the control of Food and Drug Administration of the Department of Health. At present the BFAR is working on an arrangement with FDA on the control of use of drugs in aquaculture.

BFAR personnel closely cooperate with the Bureau of Animal Industries (being part of the DA) regarding non-compliance issues at aquatic animal feed mills.

The Team was presented with evidence of functional coordination with BFAR fisheries management and Local Government Units (LGUs) in the field of food safety.

The Team noted the very positive working relationship of BFAR personnel, being at central or regional level, with the private aquaculture sector. A formal coordination agreement with a private mariculture establishment was demonstrated to the Team.

	Levels of advancement
I-7 Physical resources *The access of the VS or AAHS to relevant physical resources including buildings, transport, tele-communications, cold chain, and other relevant equipment (e.g. computers).*	1. The VS or AAHS have no or unsuitable physical resources at almost all levels and maintenance of existing infrastructure is poor or non-existent.
	2. The VS or AAHS have suitable physical resources at national (central) level and at some regional levels, and maintenance and replacement of obsolete items occurs only occasionally.
	3. The VS or AAHS have suitable physical resources at national, regional and some local levels and maintenance and replacement of obsolete items occurs only occasionally.
	4. The VS or AAHS have suitable physical resources at all levels and these are regularly maintained.
	5. The VS or AAHS have suitable physical resources at all levels (national, sub-national and local levels) and these are regularly maintained and updated as more advanced and sophisticated items become available.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1b; PP.2; PP.3

Findings:

A complete and up-to-date inventory of available physical resources at all Regions was provided to the Team.

The regional fish health laboratories are housed in a concrete building, complete with the equipment for modern communications like telephones, computers with access to internet and each fish health officer are issued with mobile phones. However, the Team was informed that computers and other electronic office equipment are not available in sufficient numbers to facilitate timely service delivery.

For mobilization, the aquatic animal health service has to share in the use of vehicles, hence travels are always planned and are scheduled. However, in case of emergency travel may be prioritized, for example, fish kill and disease outbreak.

Generally, the AAHS infrastructure is very basic and out-dated. The Team noted that personnel often has a very limited office space which are inappropriate for the work required to be performed. Given these constraints, staff are quite house-proud and maintain their environment in a clean and efficient way.

The Team's general impression of the physical infrastructure of the BFAR facilities visited is that it is inadequate and maintenance of buildings and replacement of obsolete equipment is necessary for improved functionality.

Weaknesses:

- Inappropriate, not well maintained, office and laboratory building infrastructure which, amongst other, has a negative impact on even the most basic implementation of biosecurity measures

Recommendations

- A complete review/audit of the condition and functionality of physical resources available to the AAHS is required in order to prioritize remedial actions.

	Levels of advancement
I-8 Operational funding *The ability of the VS or AAHS to access financial resources adequate for their continued operations, independent of political pressure*	1. Funding for the VS or AAHS is neither stable nor clearly defined but depends on resources allocated irregularly.
	2. Funding for the VS or AAHS is clearly defined and regular, but is inadequate for their required base operations (i.e. disease *surveillance*, early detection and rapid response and veterinary public health).
	3. Funding for the VS or AAHS is clearly defined and regular, and is adequate for their base operations, but there is no provision for new or expanded operations.
	4. Funding for new or expanded operations is on a case-by-case basis, not always based on *risk analysis* and/or cost benefit analysis.
	5. Funding for all aspects of VS or AAHS activities is adequate; all funding is provided under full transparency and allows for full technical independence, based on *risk analysis* and/or cost benefit analysis.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1b.

Findings:

The BFAR is getting an annual share in the general budgetary appropriations by the government to implement activities for the conservation and management of aquatic resources, with usually regular increases every year.

Budget is appropriated annually and is based on the budget proposal submitted to the Department of Budget and Management by BFAR.

The aquatic animal health activities funding is based on the budgetary requirements in the proposals submitted by FHO and the result of deliberations during national planning workshops.

All projects and programs of the region are aligned with the central office plans and programs, however specific activities and budgetary allocations differs according to priorities of the respective regional fisheries offices.

The Director has discretionary funding delegation powers to reassign resources when required. This would accommodate funding for new or expanded functions out of savings on a case-by-case basis and not necessarily cost-benefit analysis.

The budget has been increasing by an annual 20% since 2008 with a 50% in 2013 (due to a significant amount of the 2011 budget having been returned to Treasury due to spending inability).

I-9 Emergency funding *The capability of the VS or AAHS to access extraordinary financial resources in order to respond to emergency situations or emerging issues; measured by the ease of which contingency and compensatory funding (i.e. arrangements for compensation of producers in emergency situations) can be made available when required.*	Levels of advancement
	1. No funding arrangements exist and there is no provision for emergency financial resources.
	2. Funding arrangements with limited resources have been established, but these are inadequate for expected emergency situations (including emerging issues).
	3. Funding arrangements with limited resources have been established; additional resources for emergencies may be approved but approval is through a political process.
	4. Funding arrangements with adequate resources have been established, but in an emergency situation, their operation must be agreed through a non-political process on a case-by-case basis.
	5. Funding arrangements with adequate resources have been established and their rules of operation documented and agreed with interested parties.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1b.

Findings:

The Team was informed that no formal emergency fund is being provided for in the budget.

However, the Office of the BFAR Director has its own budget to utilize if there are unforeseen circumstances that need financial assistance and to attend to emergency cases. This can be applied for by any sector of BFAR including the fish health sector.

No provision is made for compensatory funding in any AAH emergency event.

	Levels of advancement
I-10 Capital investment *The capability of the VS or AAHS to access funding for basic and additional investments (material and non-material) that lead to a sustained improvement in the VS operational infrastructure*	1. There is no capability to establish, maintain or improve the operational infrastructure of the VS or AAHS.
	2. The VS or AAHS occasionally develops proposals and secures funding for the establishment, maintenance or improvement of operational infrastructure but this is normally through extraordinary allocations.
	3. The VS or AAHS regularly secures funding for maintenance and improvements of operational infrastructure, through allocations from the national budget or from other sources, but there are constraints on the use of these allocations.
	4. The VS or AAHS routinely secures adequate funding for the necessary maintenance and improvement in operational infrastructure.
	5. The VS or AAHS systematically secures adequate funding for the necessary improvements in operational infrastructure, including with participation from interested parties as required.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: EM.3

Findings:

Given the poor state of maintenance and repair of the facilities visited (which includes the central FHMQAS and regional fisheries offices with associated fish health laboratories) the Team notes that there seems to be a deficiency of strategic planning proposals aligned with BFAR business and work plans for the AAHS.

The Team was informed that infrastructure projects are planned for the 2013-2014 financial years which include the addition of a new building in RFO 10 compound and development of arrangements to transition BFAR to new central headquarters.

I-11. Management of resources and operations *The capability of the VS or AAHS to document and manage their resources and operations in order to analyse, plan and improve both efficiency and effectiveness.*	Levels of advancement
	1. The VS or AAHS do not have adequate records or documented procedures to allow appropriate management of resources and operations.
	2. The VS or AAHS have adequate records and/or documented procedures but do not use these for management, analysis, control or planning.
	3. The VS or AAHS have adequate records, documentation and management systems and use these to a limited extent for the control of efficiency and effectiveness.
	4. The VS or AAHS regularly analyse records and documented procedures to improve efficiency and effectiveness.
	5. The VS or AAHS have fully effective management systems, which are regularly audited and permit a proactive continuous improvement of efficiency and effectiveness.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1a; EM.3; PP.3; PP.6

Findings:

The Administrative Division of BFAR

- exercises supervision and control over the operation and management of the Division;
- implements office policies, laws, rules and regulations issued by the Civil Service Commission (CSC) and other authorities relating to general administration services and functions;
- develops administrative systems and procedures for the Central Office, the Centers and the Regional Offices.

The Team noted inventory identifications of office equipment to ensure proper management of resources.

A comprehensive personnel performance appraisal system, as well as a general personnel management system is in place for sound personnel administration. Up-to-date personnel records, including service contracts spelling out the requirements for the job to be performed, were noted by the Team.

BFAR´s Information Support Services division coordinates with the Bureau of Agricultural Statistics (BAS) in connection with their production surveys for efficient collection of fisheries data and analysis.

The Team was informed that a functional fisheries information system – being a registration database for fisheries - is available.

Continuous operation and maintenance of the BFAR Fisheries Information Management Center (FIMC) and the 13 Regional FIMCs. FIMC continuously updates the Philippine Fisheries Information System. In 2011 6,538,164 reports and data from FTP/Web Servers were downloaded and at the same time maintaining the Bureau's website.

III.2 Fundamental component II: Technical authority and capability

This component of the evaluation concerns the authority and capability of the VS to develop and apply sanitary measures and science-based procedures supporting those measures. It comprises seventeen critical competencies

Critical competencies:

Section II-1	**Laboratory diagnosis** **A. Access to laboratory diagnosis** **B. Suitability of national laboratory infrastructures**
Section II-2	**Laboratory quality assurance**
Section II-3	**Risk analysis**
Section II-4	**Quarantine and border security**
Section II-5	**Epidemiological surveillance and early detection** **A. Passive Epidemiological surveillance** **B. Active Epidemiological surveillance**
Section II-6	**Emergency response**
Section II-7	**Disease prevention, control and eradication**
Section II-8	**Food safety** **A. Regulation, authorisation and inspection of establishments for production, processing and distribution of food of aquatic animal origin** **B. Inspection of collection, slaughter, processing and distribution of products of aquatic animal origin**
Section II-9	**Veterinary medicines and biologicals**
Section II-10	**Residue testing**
Section II-11	**Aquatic animal feed safety**
Section II-12	**Traceability** **A Aquatic animal movement control** **B. Traceability of products of aquatic animal origin**
Section II-13	**Welfare of farmed fish**

Aquatic Code **references:**

Chapter 2.2. on Import risk analysis.

Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / General organisation / Procedures and standards.

Chapters 6.2. on Introduction to the recommendations for controlling antimicrobial resistance.

Chapter 6.3. on Principles for responsible and prudent use of antimicrobial agents in aquatic animals.

Chapter 6.4. on Monitoring of the quantities and usage patterns of antimicrobial agents used in aquatic animals.

Chapter 6.5. on Development and harmonisation of national antimicrobial resistance surveillance and monitoring programmes for aquatic animals.

Chapter 7.1. on Introduction to the recommendations for the welfare of farmed fish.

Chapter 7.2. on Welfare of farmed fish during transport.

Chapter 7.3. on Welfare aspects of stunning and killing of farmed fish for human consumption.

Chapter 7.4. on Killing of farmed fish for disease control purposes.

Terrestrial Code **references:**

Point 1 of Article 3.2.4. on Evaluation criteria for quality systems.
Point 3 of Article 3.2.6. on Evaluation criteria for material resources: Technical.
Points 1 and 2 of Article 3.2.7. on Legislation and functional capabilities: Animal health, animal welfare and veterinary public health / Export/import inspection.
Points 1-3 of Article 3.2.8. on Animal health controls: Animal health status / Animal health control / National animal disease reporting systems.

Points 1-5 of Article 3.2.9. on Veterinary public health controls: Food hygiene / Zoonoses / Chemical residue testing programmes / Veterinary medicines/ Integration between animal health controls and veterinary public health.
Sub-point f) of Point 4 of Article 3.2.10. on Veterinary Services administration: Formal linkages with sources of independent scientific expertise.
Points 2 and 5-7 of Article 3.2.14. on National information on human resources / Laboratory services / Veterinary legislation, regulations and functional capabilities / Animal health and veterinary public health controls.

Codex Alimentarius Commission standards:

General Principles of Food Hygiene (CAC/RCP 1-1969).
Code of practice for fish and fishery products (CAC/RCP 52-2003).

II-1 Laboratory diagnosis **A. Access to laboratory diagnosis** *The authority and capability of the VS or AAHS to have access to laboratory diagnosis in order to identify and record pathogenic agents, including those relevant for public health, that can adversely affect aquatic animals and aquatic animal products.*	**Levels of advancement**	
	1.	Disease diagnosis is almost always conducted by clinical means only, with no access to and use of a laboratory to obtain a correct diagnosis.
	2.	**For major *diseases* of national economic importance, the VS or AAHS have access to and use a *laboratory* to obtain a correct diagnosis.**
	3.	For other *diseases* present in the country, the VS or AAHS have access to and use a *laboratory* to obtain a correct diagnosis.
	4.	For *diseases* of economic importance not present in the country, but known to exist in the region and/ or that could enter the country, the VS or AAHS have access to and use a *laboratory* to obtain a correct diagnosis.
	5.	In the case of new and *emerging diseases* in the region or world, the VS or AAHS have access to and use a network of national or international reference laboratories (e.g. an OIE Reference Laboratory) to obtain a correct diagnosis.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.7; E.11; E.27; PP.4

Findings:

The Fish Health Management and Quality Assurance Laboratory (FHMQAL) of the Bureau of Fisheries and Aquatic Resources is the primary aquatic animal laboratory in the country. There are other laboratory like South East Asian Fisheries Development Centre (SEAFDEC) and Negros Prawn Producers Cooperative (NPPC), which also provides limited aquatic animal health services.

The FHMQAL is also conducting residue analysis and is recognizing private laboratories on the analysis that are not available in the laboratory. The recognized laboratories are SGS Philippines Inc. and Sentrotek-Philippines.

Each regional office is operating a fish health laboratory, the capability of each laboratory is dependent on the needs of the region.

The FHMQAS develops and updates standardized routine procedures and guidelines for the operation of the regional fish health laboratories. It also supervises the activities and sets directions for the operation of such laboratories. The FHMQAS also provides technical guidance and instructions to the 44 BFAR designated Regional Fish Health Officers on the execution of diagnostic activities and technical assistance on fish health-related and residue-monitoring programs. It also provides specialized training on fish disease diagnosis as well good aquaculture practices to fishery biologists, extension workers, and fish farmers.

The shrimp producing area such as Bacolod, Negros Occidental requires the services of the laboratory. The farmers have formed a cooperative named **Negros Prawn Producers Cooperative** and developed a laboratory with financial and technical assistance from BFAR and capable of providing limited aquatic animal health services for the region.

SEAFDEC is utilised on an as-needed basis for limited diagnostic services. The SEAFDEC laboratory is recognised by BFAR for rendering diagnostic service.

BFAR diagnostic capacity is limited to gross pathology examination, wet preparation microscopy, Polymerase Chain Reaction (PCR) test and microbiology, although the latter is limited.

The Team found no evidence of harmonised standard diagnostic procedures available to staff, no formal staff training against standards, and very few standard operating procedures. There is no active research or development of diagnostic procedures for diseases of

concern. In general, the Philippine aquatic animal health laboratory network has rudimentary capacity and is unable to meet minimum standards of diagnostic analysis of aquatic animals.

Strengths:

- BFAR have a regional network of aquatic animal health laboratories.
- Laboratories have the capacity to respond to new demands; for example, development and implementation of molecular diagnostic capability following the first WSSV outbreak.

Weaknesses:

- Essential aquatic animal health diagnostic capability is restricted to limited molecular diagnosis, gross pathology examination and wet preparation microscopy.

Recommendations

- Review the aquatic animal health diagnostic disciplines that are required to obtain a correct diagnosis and plan, invest and develop national capacity based on the review outcomes.
- Develop national standard diagnostic procedures. Validate and harmonise tests across the national diagnostic network. Review standard diagnostic procedures on a regular basis and as required.

	Levels of advancement	
II-1 Laboratory diagnosis **B. Suitability of national laboratory infrastructures** *The sustainability, effectiveness and efficiency of the national (public and private) laboratory infrastructures to service the needs of the VS or AAHS*	1.	The national laboratory infrastructure does not meet the need of the VS or AAHS.
	2.	**The national laboratory infrastructure meets partially the needs of the VS or AAHS, but is not entirely sustainable, as organisational deficiencies with regard to the effective and efficient management of resources and infrastructure (including maintenance) are apparent.**
	3.	The national laboratory infrastructure generally meets the needs of the VS or AAHS. Resources and organisation appear to be managed effectively and efficiently, but their regular funding is inadequate to support a sustainable and regularly maintained infrastructure.
	4.	The national laboratory infrastructure generally meets the needs of the VS or AAHS and is subject to timely maintenance programmes but needs new investments in certain aspects (e.g. accessibility to laboratories, number or type of analyses).
	5.	The national laboratory infrastructure meets the needs of the VS or AAHS, and is sustainable and regularly audited.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.7; E.11; E.27; PP.4; PP.11; PP.12; PP.13

Findings:

The summary of equipment for central and regional fish health laboratories is listed in Table 5 of document E.1b in Annex 6. The laboratories in the region are serving many purposes, not solely for aquatic animal health services. Most of the regional laboratories are housed in a concrete building complete with the equipment for modern communications like telephones, limited ICT with access to internet, and each fish health officer are issued with cell phones.

Essential aquatic animal health diagnostic capability is restricted to limited molecular diagnosis, gross pathology examination and wet preparation microscopy, and infrastructure is geared to meet only these restricted services. Several new building plans were sighted; however, none of these included a plan for a properly designed dedicated aquatic animal health laboratory.

Weaknesses:

- No laboratories visited by the team were designed to meet the minimum laboratory diagnostic standards for aquatic animal health.

Recommendations

- Review the aquatic animal health diagnostic disciplines that are required to obtain a correct diagnosis and design functional laboratories accordingly.
- Develop information and communication technology (ICT) administrative and diagnostic support across the laboratory network.

II-2 Laboratory quality assurance *The quality of laboratories as measured by the use of formal QA systems, including, but not limited to, participation in relevant proficiency testing programmes*.	Levels of advancement	
	1.	**No laboratories used by the public sector VS or AAHS are using formal QA systems.**
	2.	Some laboratories used by the public sector VS or AAHS are using formal QA systems.
	3.	All laboratories used by the public sector VS or AAHS are using formal QA systems.
	4.	All the laboratories used by the public sector VS or AAHS and most or all private laboratories are using formal QA systems.
	5.	All the laboratories used by the public sector VS or AAHS and most or all private laboratories are using formal QA programmes that meet OIE, ISO 17025, or equivalent QA standard guidelines.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.7; E.11; E.19; E.27; PP.4

Findings:

The Team found no evidence of formal quality management systems in place in AAHS in the Philippines.

The BFAR laboratories are not accredited for the purposes of providing laboratory services to aquatic animal health by any government recognised or approved accreditation authority.

Central Office, Regions 3 and 7 are participating in the regional proficiency testing program for aquatic animal disease laboratories in the Asia-Pacific. The three year project is scheduled to run from 2012-14.

Strengths:

- ISO:17025 has been obtained for residue testing in 1 laboratory (Central Offfice).

Recommendations

- **Review aquatic animal health laboratory capacity required for each Region** and attain relevant internationally recognized accreditation standards that are fit for purpose.

	Levels of advancement	
II-3 Risk analysis *The authority and capability of the VS or AAHS to base its risk management measures on risk assessment.*	1.	*Risk management* measures are not usually supported by *risk assessment*.
	2.	**The VS or AAHS compile and maintain data but do not have the capability to carry out *risk analysis*. Some *risk management* measures are based on *risk assessment*.**
	3.	The VS or AAHS compile and maintain data and have the capability to carry out risk *analysis*. The majority of *risk management* measures are based on *risk assessment*.
	4.	The VS or AAHS conduct *risk analysis* in compliance with relevant OIE standards, and base their *risk management* measures on the outcomes of *risk assessment*.
	5.	The VS or AAHS are consistent in basing sanitary measures on *risk assessment*, and in communicating their procedures and outcomes internationally, meeting all their OIE obligations (including WTO SPS Agreement obligations where applicable).

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: PP.4; PP.5, H.4B

Evidence

The team sighted a risk analysis report for the importation of red claw crayfish from Australia.

Findings:

There are no formal processes in place for import risk analysis.

Some risk analysis has been undertaken in recent times, for example; importation of red claw crayfish, but the primary focus appears to be aquatic pest concern rather than aquatic animal health and the method used is not fully aligned with international standards.

The team found evidence of import requirements not based on an import risk analysis. There is no formal process to prioritise and initiate a review of existing import requirements.

BFAR have convened an informal ad-hoc group for this task; however the membership appears fragmented and unstructured due to the process having no dedicated resources to conduct this work.

Following the import risk analysis process, the team found no procedure for developing, determining or implementing import risk management options.

Recommendations

- Provide for a dedicated and trained team to undertake risk analysis according to international standards and **establish a risk analysis section under the Fisheries Regulatory and Quarantine Division of BFAR**.
- Develop import risk analysis guidelines.
- Undertake a review of existing risk management measures.

	Levels of advancement	
II-4 Quarantine and border security *The authority and capability of the VS or AAHS to prevent the entry and spread of diseases and other hazards of aquatic animals and aquatic animal products.*	1.	The VS or AAHS cannot apply any type of quarantine or border security procedures for *aquatic animals* or *aquatic animal products* with their neighbouring countries or trading partners.
	2.	**The VS or AAHS can establish and apply quarantine and border security procedures; however, these are generally based neither on international standards nor on a *risk analysis*.**
	3.	The VS or AAHS can establish and apply quarantine and border security procedures based on international standards, but the procedures do not systematically address illegal activities[43] relating to the import of *aquatic animals* and a*quatic animal products*.
	4.	The VS or AAHS can establish and apply quarantine and border security procedures which systematically address legal pathways and illegal activities.
	5.	The VS or AAHS work with their neighbouring countries and trading partners to establish, apply and audit quarantine and border security procedures which systematically address all risks identified.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1c; E.24; E.27; PP.4

Findings:

Import policy and procedures for live aquatic animals and aquatic animal products are in place.

The Team noted that inspection for live aquatic animals is not always compliant with the import measures and some measures required amendment. Staff were unacquainted with any formal process to communicate, amend and implement changes to import risk management measures.

Inspectors have no dedicated facilities to execute appropriate inspections of live aquatic animals. Inspectors are not trained in fish identification for permitted species. Border inspection officers were not acquainted with standard operating procedures for testing and destruction of import consignments of non-compliant live aquatic animals. Current inspection is based mostly on document control with limited physical inspection.

Strengths:

- BFAR cooperate well with customs and the animal and plant inspectorate.

Weaknesses:

- Inspection infrastructure is inadequate.

Recommendations

- Improve coordination for with border staff for feedback, amendment and continual improvement of import risk management measure policy.
- Review the need for dedicated sea and airport facilities to inspect and hold live imported aquatic animals.

[43] Illegal activities include attempts to gain entry for aquatic animals or aquatic animal products other than through legal entry points and/or using certification and/or other procedures not meeting the country's requirements.

	Levels of advancement	
II-5 Epidemiological surveillance and early detection *The authority and capability of the VS or AAHS to determine, verify and report on the sanitary status of the aquatic animal populations including wildlife under their mandate.* **A. Passive epidemiological surveillance**	1.	The VS or AAHS have no passive surveillance programme.
	2.	**The VS or AAHS conduct passive surveillance for some relevant *diseases* and have the capacity to produce national reports on some *diseases*.**
	3.	The VS or AAHS conduct passive surveillance in compliance with OIE standards for some relevant *diseases* at the national level through appropriate networks in the field, whereby samples from suspect cases are collected and sent for laboratory diagnosis with evidence of correct results obtained. The VS have a basic national disease reporting system.
	4.	The VS or AAHS conduct passive surveillance and report at the national level in compliance with OIE standards for most relevant *diseases*. Producers and other interested parties are aware of and comply with their obligation to report the suspicion and occurrence of *notifiable diseases* to the VS.
	5.	The VS or AAHS regularly report to producers and other interested parties and the international community (where applicable) on the findings of passive surveillance programmes.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1c; E.23; EM.4; PP.4; H.4B

Findings:

Passive surveillance is conducted on an ad-hoc basis. BFAR leverage off diagnostic opportunities as they arise from events such as fish kills, requests from local fish farmers, and occasional visits for activities such as collection of samples for targeted bi-annual residue testing.

Registered farms (no more than 10% of all facilities) supplying both export, regional domestic and local markets have ad-hoc passive surveillance using limited diagnostic capabilities. The disease surveillance and on-farm residue monitoring form includes basic wet-preparation and gross pathology examination information.

The following tables summarize the active and passive surveillance test results for the past 2 years. Almost all testing was undertaken by BFAR Central Office Fish Health Laboratory:

Table 15. Summary of the Results of PCR Test for Shrimp Diseases, 2011 and 2012

Diseases	2011			2012		
	Total	Positive	Negative	Total	Positive	Negative
WSD	1,425	21	1,404	1,433	121	1312
TSV	256	0	256	441	0	441
IHHN	199	29	170	144	17	127
IMN	174	0	174	239	0	239
YHD	170	0	170	96	0	96
NHP	133	0	133	176	0	176
MrNV	2	0	2	45	0	45
PvNV	28	0	28	51	0	51
MBV	12	0	12	122	9	113

WSD= White Spot Disease **TSV**= Taura Syndrome Virus
IHHN= Infectious hypodermal and haematopoeitic necrosis
IMN= Infectious myonecrosis **YHD**= Yellowhead disease
NHP= Necrotizing hepatopancreatitis **MrNV**= White tail disease
PvNV= *Penaeusvannamei*nodavirus (PvNV) **MBV**= Monodonbaculovirus

Table 16. Summary of the Results of PCR Test for Finfish Diseases, 2010 and 2011

Diseases	2010			2011		
	Total	Positive	Negative	Total	Positive	Negative
KHV	698	0	698	610	0	610
GIV	13	1	12	35	4	31
VNN	13	0	0	49	0	49

KHV= Koi herpesvirus **GIV=** Grouper Iridovirus **VNN=** Viral Nervous Necrosis

Weaknesses:

- There is limited capacity for further and more comprehensive diagnostic analysis and data collection and analysis

Recommendations

- A dedicated epidemiology unit at RFO level should be established to analyse available data and provide for a data information system
- The reorting role of fish farmers in respect of AAH should be clearly defined and reporting pathways developed with LGUs.

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II-5. Epidemiological surveillance and early detection *The authority and capability of the VS or AAHS to determine, verify and report on the sanitary status of the aquatic animal populations including wildlife under their mandate.* **B. Active epidemiological surveillance**	Levels of advancement	
	1.	The VS/ AAHS have no active surveillance programme.
	2.	**The VS/ AAHS conduct active surveillance for some relevant *diseases* (of economic and zoonotic importance) but apply it only in a part of susceptible populations and/or do not update it regularly.**
	3.	The VS/ AAHS conduct active surveillance in compliance with scientific principles and OIE standards for some relevant *diseases* and apply it to all susceptible populations but do not update it regularly.
	4.	The VS/ AAHS conduct active surveillance in compliance with scientific principles and OIE standards for some relevant *diseases*, apply it to all susceptible populations, update it regularly and report the results systematically.
	5.	The VS/ AAHS conduct active surveillance for most or all relevant *diseases* and apply it to all susceptible populations. The surveillance programmes are evaluated and meet the country's OIE obligations.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1c; E.23; EM.4; PP.4; H.4B

Findings:

BFAR have completed a two-year active surveillance project for koi herpes virus.

BFAR have active targeted surveillance for submitted shrimp samples from accredited hatcheries for some diseases of concern. Testing is conducted at most BFAR laboratories and two recognised privately operated laboratories.

Koi herpesvirus (VNN) - 2011	
Species	*Cyprinuscarpio*(koi carp)
Sources of samples	Quezon City Freshwater Ornamental Fish Aquaculture Park (FOFAP), Bay, Laguna NFBC, Butong, Lemery, Batangas
Total No. of Samples	610
Results	All Samples Negative

Weaknesses:

- There is limited capacity for further and more comprehensive diagnostic analysis and data collection and analysis.
- The team noted no evidence of strategic active epidemiological surveillance based on scientific evidence or risk analysis

	Levels of advancement	
II-6 Emergency response *The authority and capability of the VS or AAHS to respond rapidly to a sanitary emergency (such as a significant disease outbreak or food safety emergency).*	1.	The VS or AAHS have no field network or established procedure to determine whether a sanitary emergency exists or the authority to declare such an emergency and respond appropriately.
	2.	**The VS or AAHS have a field network and an established procedure to determine whether or not a sanitary emergency exists, but lack the necessary legal and financial support to respond appropriately.**
	3.	The VS or AAHS have the legal framework and financial support to respond rapidly to sanitary emergencies, but the response is not coordinated through a chain of command. They may have national contingency plans for some exotic aquatic animal *diseases* but they are not updated/tested.
	4.	The VS or AAHS have an established procedure to make timely decisions on whether or not a sanitary emergency exists. The VS or AAHS have the legal framework and financial support to respond rapidly to sanitary emergencies through a chain of command. They have national contingency plans for some exotic *diseases* that are regularly updated/tested.
	5.	The VS or AAHS have national *contingency plans* for all *diseases* of concern, including coordinated actions with relevant *Competent Authorities*, all producers and other interested parties through a chain of command. These are regularly updated, tested and audited.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1c; E.23; E.24; EM.1

Findings:

A QRT (quick response team) has been established, but priority is on illegal fishing and fish kills.

No simulation exercises have been conducted for disease preparedness and training purposes.

BFAR lists the following OIE listed aquatic animal diseases that should/could be the subject of emergency response in the country, however there is no identifiable skilled and coordinated structure for dealing with aquatic animal emergency disease response.

- 1. Infectious myonecrosis
- 2. Taura syndrome
- 3. Koi herpesvirus

Recommendations

- Develop, review and update national emergency response plans for aquatic animal diseases of national concern.
- **Constitute a permanent expert consultative committee (core competency group of AAH veterinarians)** to render professional support, advice on actions, coordinate emergency aquatic animal disease response.
- Conduct a simulation exercise for disease preparedness and training purposes.

	Levels of advancement	
II-7 Disease prevention, control and eradication *The authority and capability of the VS or AAHS to actively perform actions to prevent, control or eradicate OIE listed diseases and/or to demonstrate that the country or a zone are free of relevant diseases*.	1.	The VS or AAHS have no authority or capability to prevent, control or eradicate aquatic animal *diseases*.
	2.	**The VS or AAHS implement prevention, control or eradication programmes for some *diseases* and/or in some areas with little or no scientific evaluation of their efficacy and efficiency.**
	3.	The VS or AAHS implement prevention, control or eradication programmes for some *diseases* and/or in some areas with scientific evaluation of their efficacy and efficiency.
	4.	The VS or AAHS implement prevention, control or eradication programmes for all relevant *diseases* but with scientific evaluation of their efficacy and efficiency of some programmes.
	5.	The VS or AAHS implement prevention, control or eradication programmes for all relevant *diseases* with scientific evaluation of their efficacy and efficiency consistent with relevant OIE international standards.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1c; E.2; E.14; E.20; EM.3

Findings:

There is limited national planning for prevention, control and eradication across the entire aquatic animal production structure at all levels.

There is no vaccine/vaccination programme for OIE listed aquatic animal diseases.

The Team was informed that the AAHS is at present addressing mainly White Spot Shrimp Virus in shrimp as a major target of preventative and control actions. In order to comply with OIE Code Standards the AAHS of the Philippines should take due cognizance of endemic as well as exotic diseases in neighbouring countries and the respective geographical region and implement appropriate action. The Team thus recommends a re-assessment of AAHSs aquatic animal disease control actions and priorities in order to comply with the requirements in respect of early disease detection and emergency response.

FAO administrative order #1 series of 2012 - Declaring the List of Notifiable Animal Diseases is used for the purposes of reporting OIE listed aquatic animal diseases. BFAR do not harmonise with regionally reportable diseases of concern, nor do BFAR have a national list of reportable aquatic animal diseases of concern to the Philippines. A proposal to develop national listing policy is in preparation.

Research and development in aquaculture is an important core BFAR activity. There are comprehensive, nationally important programs aimed at exploiting freshwater resources for aquaculture. Bio-security is an essential component of aquaculture development programs, however, the team noted with concern that current research and development lacks an identifiable biosecurity component that would demonstrate minimum health management through the production chain aimed at reducing the risk of disease outbreak to acceptable and more sustainable levels.

Weaknesses:

- There is **limited or no national planning for emergency response, decontamination and disposal compliant with international standards.**
- There are no on-going national health management strategies to re-establish aquatic animal production capacity following disease incursion and emergency response.
- There are no national cost recovery or compensation/insurance arrangements for aquatic animal emergency disease responses.

Recommendations

- The QRT focus is limited to fish kills and should expand according to future strategic planning for aquatic animal health management
- Include bio-security plans and active biosecurity management in all research and development programs and provide extension services to help develop on-farm bio-security plans and training for industry.

	Levels of advancement
II-8 Food safety **A. Regulation, authorisation and inspection of establishments for production, processing and distribution of food of aquatic animal origin** *The authority and capability of the VS or AAHS to establish and enforce sanitary standards for establishments that produce, process and distribute food of aquatic animal origin*	1. Regulation, authorisation and inspection of relevant *establishments* are generally not undertaken in conformity with international standards.
	2. Regulation, authorisation and inspection of relevant *establishments* are undertaken in conformity with international standards in some of the major or selected premises (e.g. only at export premises).
	3. Regulation, authorisation and inspection of relevant *establishments* are undertaken in conformity with international standards in all premises supplying throughout the national market.
	4. Regulation, authorisation and inspection of relevant *establishments* (and coordination, as required) are undertaken in conformity with international standards for premises supplying national and local markets.
	5. Regulation, authorisation and inspection of relevant *establishments* (and coordination, as required) are undertaken in conformity with international standards at all premises (including on-farm establishments).

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1c; E.14; E.21; EM.3

Findings:

Regulation, authorisation and inspection of production and processing of aquatic animal products for human consumption is conducted satisfactorily for export premises.

The following is a summary of BFAR and EU approved fisheries establishments for export:

Table 17. List of categories and location of establishments, including fishing vessels (e.g. Processing and freezer vessels) for handling/processing fish and fishery products

Sector	**Production type**									
Commercial fisheries	**Region**	Landing site	Fishing vessels				Processing sites			Ice factories
			EU appr. Carrier	**EU** Appr. Catcher	**BFAR** Appr. Carrier	**BFAR** Appr. Catcher	**EU** Approved Fishery Establishments	**BFAR** Approved Fishery Establishments	**BFAR** Approved pre-Processing, Buying And Picking station	**BFAR** Approved Ice Plants
	1	1	**44	**40	**2	**1	1	-	-	-
	III	-	-	-	-	-	1	2	3	-
	IV-A	2					12	12	2	-
	IV-B	-					1	3	6	-
	V	1					-	1	-	-
	VI	1					-	3	1	-
	VII	-					2	2	-	-
	VIII	-					-	1	-	-
	IX	1					8	8	7	4
	X	-					1	1	-	-
	XI	1					-	3	-	-
	XII	1					20	9	3	-
Municipal Fisheries										
1) Marine					396					
2) Inland										
Total		**8**	**44**	**40**	**398**	**1**	**46**	**45**	**22**	**4**

Note:

1. *includes 4 EU approved cold storage facilities
2. ** Fishing boats and vessels are located at different regions
3. BFAR Approved Pre-processing plants, buying stations, picking plants and ice plants are supplying to BFAR and EU approved establishments.

Strengths:

- EU and other major trading partners approved export facilities.

	Levels of advancement	
II-8 Food safety **B. Inspection of collection, slaughter, processing and distribution of products of aquatic animal origin** *The authority and capability of the VS or AAHS to inspect, manage, implement and coordinate aquatic animal production and food safety in relation to the collection, slaughter, processing and distribution of products of aquatic animals.*	1.	Inspection, management, implementation and coordination (as appropriate) are generally not undertaken in conformity with international standards, including collection of disease information.
	2.	**Inspection, management, implementation and coordination (as appropriate) are generally undertaken in conformity with international standards only for export purposes, including collection of disease information.**
	3.	Inspection, management, implementation and coordination (as appropriate) are generally undertaken in conformity with international standards only for export purposes and for products that are distributed throughout the national market, including collection of disease information.
	4.	Inspection, management, implementation and coordination (as appropriate) are generally undertaken in conformity with international standards for export purposes and for products that are distributed throughout the national and local markets, including collection of disease information.
	5.	Inspection, management, implementation and coordination (as appropriate) are undertaken in full conformity with international standards for products at all levels of distribution (including national and local markets and direct sales), including collection of disease information.

[Note: This critical competency primarily refers to inspection of processed aquatic animal products. It may in some countries be undertaken by an agency other than the VS / AAHS.]
Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1c; E.1e; E.7; E.14; E.16; E.17; E.21; EM.3

Findings:

The Team was informed, that BFAR established in early 2012 a Technical Working Group (TWG) tasked to develop and prepare a written draft of Memorandum of Agreement (MoA) and Terms of Reference to eventually institutionalize the operation of a Philippine-Rapid Alert System for Food and Feed Notifications (Phil-RASFF). The MoA is now on its final draft form awaiting only for the signing by the concerned Department Heads and Agency Principals.

The **DA-BFAR has developed Phil-RASFF** patterned after ASEAN-RASFF that is hooked to EU RASFF. At this time, since the Phil-RASFF is still not operational, the Phil-RASFF software program and its procedure of implementation was made possible through the technical assistance provided by EU Trade Related Technical Assistance project- Phase 2, for fish and fishery products.

The Team noted the findings of the EU 2011-8896 inspection report regarding Rapid Alert System For Food And Feed (RASFF) Notifications, which are[44]:

- *There have been twelve RASFF notifications concerning fishery products since 2006. Five on high levels of histamine, three on high levels of cadmium, two on the absence of health certificates, one on damaged packaging and one on bad temperature control*.

[44] E.7

II-9 Veterinary medicines and biologicals *The authority and capability of the VS or AAHS to regulate veterinary medicines and veterinary biologicals, in order to ensure their responsible and prudent use, i.e. the marketing authorisation, registration, import, manufacture, quality control, export, labelling, advertising, distribution, sale (includes dispensing) and use (includes prescribing) of these products.*	Levels of advancement
	1. The VS or AAHS cannot regulate veterinary medicines and veterinary biologicals.
	2. The VS or AAHS have some capability to exercise regulatory and administrative control over veterinary medicines and veterinary biologicals in order to ensure their responsible and prudent use.
	3. The VS or AAHS exercise regulatory and administrative control for most aspects related to the control over veterinary medicines and veterinary biologicals in order to ensure their responsible and prudent use.
	4. The VS or AAHS exercise comprehensive and effective regulatory and administrative control of veterinary medicines and veterinary biologicals.
	5. The control systems are regularly audited, tested and updated when necessary.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1c; E.4; E.25.

Findings:

The control of veterinary medicines and veterinary biological lies with the Food and Drug Administration-Department of Health (FDA-DoH), formerly the Bureau of Food and Drugs.

Republic Act (RA) No. 9711 in 2009, the FDA-DoH has strengthened regulatory powers, resources and capabilities to perform its mandate. Legislation on the control of veterinary drugs and biologicals include: RA No. 9711 – the Food and Drug Administration Act; RA No. 1556 – the Livestock and Poultry Feeds Act; RA No. 3720 – the Foods, Drugs and Devices and Cosmetics Act; RA No. 6675 – the Generics Act; RA No. 1071 – an Act to *Regulate the Sale of Veterinary Biologics and Medicinal Preparations* and succeeding Administrative Orders.

FDA has given the authority to the Bureau of Animal Industry (BAI) to regulate veterinary drugs and biologicals. Veterinary drugs and biologicals must be registered before they can be placed on the market. They are evaluated and registered based on the specific requirements and standards. Veterinary biologicals registration is renewed every two years.

Prescribing rights for veterinary drugs and biologicals are defined under an Administrative Order. Only licensed veterinarians are authorised to prescribe drugs.

Their distribution and sale are also monitored through inspection of outlets, aquaculture farms and feedmills. To date there is no registered vaccine for aquaculture.

For products that are intended for use in aquaculture, a draft joint DoH-FDA and DA-BFAR administrative order is at present being developed.

Recommendations

- BFAR to implement the proposed administrative order with the FDA.

II-10. Residue testing *The capability of the VS or AAHS to undertake residue testing programmes for veterinary medicines, chemicals, pesticides, radionuclides, metals, etc.*	Levels of advancement
	1. No residue testing programme for aquatic animal products exists in the country.
	2. Some residue testing programme is performed but only for selected aquatic animal products for export.
	3. A comprehensive residue testing programme is performed for all aquatic animal products for export and some for domestic use.
	4. A comprehensive residue testing programme is performed for all aquatic animal products for export and/or internal consumption.
	5. The residue testing programme is subject to routine quality assurance and regular evaluation.

[Note: This critical competency may in some countries be undertaken by an agency or agencies other than the VS or AAHS.]

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1c; E.4; E.7; E.25.

Findings:

The National Residue Monitoring Program (NRMP) is being implemented by the Fish Health Management and Quality Assurance Section (FHMQAS) in coordination with the 15 BFAR Regional Offices. This is part of the food safety control program of BFAR.

The program started in 2004 in compliance with the EU Directive 96/23/EC. The program is being implemented, in coordination with other departments such as the Department of Health (DoH), and other attached agencies of the Department of Agriculture (DA). Policies are either in the form of Republic Acts, Presidential Decree and Administrative Orders by the Bureau of Fisheries and Aquatic Resources (BFAR), the Bureau of Animal Industry (BAI), Food and Drug Administration (DOH-FDA) and the Fertilizer and Pesticide Authority (FPA).

The program was strengthened thru enactment of the DA- Administrative Order(AO) No. 14, Series of 2006 – Implementation of the National Veterinary Drug Residues Control Program and Creation of the Inter-agency Committee and the DA-AO No. 24, Series of 2009 – Implementing Guidelines on the National Veterinary Drug Residues Control Program in Food Pursuant to Administrative Order No. 14, Series of 2006.

The program includes: registration of aquaculture farms; farm hygiene inspection; disease surveillance; sampling for residue analysis based on risk identified by the farm inspectors, and; sampling of feeds at the aquatic feedmills.

The substances monitored are: (a) banned antibiotics- chloramphenicol and nitrofurans; (b) regulated antibiotics- chlortetracycline, oxytetracycline, sulfamethazine, amoxicillin, trimethoprim, sulfadiazine; (c) anthelmintics- ivermectin; (d) organochlorines; (e) chemical elements; (f) mycotoxin; (g) dyes.

The FHMQAS coordinates with the Fish Inspection Unit (FIU) and Administrative Support and Product Certification Unit (ASPCU) on the results of monitoring of aquaculture farms supplying raw materials to the fish processing plants.

Regional Fish Health Officers regularly coordinate with the officers of the FHMQAS in the implementation of the official program, including residue monitoring. Reports are also being submitted to the FHMQAS for consolidation and analysis.

A “Manual of operation” was developed for the implementation of the NRMP including targeting of samples, sampling procedures at the farm, processing plants and feedmillers; sample coding; preservation, and; sending samples to the laboratory for analysis. National and regional targeting of samples are done every year, the main criteria are the result of

previous analyses, the level of intensification, the disease surveys, production and risk identified.

In case of non-compliance, appropriate action is taken. In the case of findings of the presence of banned antibiotics in shrimp/fish samples obtained from a farm, such premises are banned to produce for the export market. Farms are given the chance to explain and trace the root of the problem .In the next 12 months, the farm is subjected to more stringent checks for the residues in question. The results are also immediately provided to the exporters who are to recall the products if the product is no longer under their control. No health certificates are issued in cases when laboratory results indicate positive for banned antibiotics.

For detection of regulated antibiotics in animals that are still in the farm, farmer is advised to delay harvest for an appropriate withdrawal period of the substance in question.

For feed mills, regulatory actions are recommended on any violations of policies and guidelines on the registration, manufacture, distribution, and usage of aquatic animal feeds.

Feeds that show levels of contaminants, such as B3d Aflatoxin above the 20 ppb value are immediately notified and reported to the BAI for their appropriate action. Aqua-feeds adulterated with banned antibiotics are destroyed according to the guidelines set by the BAI.

Establishments with non-compliances are subjected to more frequent sampling by the regional fish health officers.

Strengths:

- BFAR have implementation capacity to implement residue testing programs in response to EU market requirements.

	Levels of advancement	
II-11 Aquatic animal feed safety *The authority and capability of the VS or AAHS to regulate aquatic animal feed safety e.g. processing, handling, storage, distribution and use of both commercial and on-farm produced aquatic animal feed and feed ingredients.*	1.	The VS or AAHS cannot regulate aquatic animal feed safety.
	2.	The VS or AAHS have some capability to exercise regulatory and administrative control over aquatic animal feed safety.
	3.	**The VS or AAHS exercise regulatory and administrative control for most aspects of aquatic animal feed safety.**
	4.	The VS or AAHS exercise comprehensive and effective regulatory and administrative control of aquatic animal feed safety.
	5.	The control systems are regularly audited, tested and updated when necessary.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1c; E15; E.25.

Findings:

The BAI is the authority for the registration of animal feeds, commercial and non-commercial feed manufacturer, importer, supplier and distributor. Registration is renewed every year.

In a Memorandum of Agreement of BAI and BFAR in 2001 on the regulation on animal feed, veterinary drugs and products in aquaculture, the Fish Health Officers were deputized as Aquatic Animal Feed, Veterinary Drug and Products Control Officers (AAFVDAPCOs) as per DA Special Order No. 23, Series of 2002 — Deputation of BFAR Fish Health Officers as Aquatic Animal Feed, Veterinary Drugs and Products Control Officers. As such, they conduct the monitoring of the aquatic feed mills. Sampling of feeds at the feedmills are done for the analysis of banned antibiotics (chloramphenicol) and aflatoxin following the procedure by BAI. Non-compliances are reported to BAI for appropriate action.

For unprocessed raw feeds of aquatic animal origin there are no regulations or controls in place in either research institutes or aquaculture production facilities.

Strengths:

- Once deputized to undertake this work BFAR will have the capacity and competence to meet their objectives.

Recommendations:

- Review the extent of the practice and the disease risks associated with feeding unprocessed aquatic animals (trash fish) to aquatic animals used in aquaculture and research.

	Levels of advancement	
II-12. Traceability **A Aquatic animal movement control** *The authority and capability of the VS or AAHS, normally in coordination with producers and other interested parties, to trace their history, location and movement for the purpose of aquatic animal disease control, food safety, or trade.*	1.	The VS or AAHS do not have the authority or the capability to trace aquatic animals or control their movements.
	2.	**The VS or AAHS can trace some aquatic animals and control some movements, using traditional methods and/or actions designed and implemented to deal with a specific problem.**
	3.	The VS or AAHS implement procedures for aquatic animal traceability and movement control for specific aquatic animal subpopulations as required for disease control, in accordance with relevant international standards.
	4.	The VS or AAHS implement all relevant aquatic animal traceability and movement control procedures, in accordance with relevant international standards.
	5.	The VS or AAHS carry out periodic audits of the effectiveness of their traceability and movement control systems.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence: E.1c; E.15; E.16.

Findings:

The BFAR–FIU implements Article 9 on Traceability of FAO 227; Rules and Regulations governing the export of fish and aquatic products to EU Member Countries. The fishery aquaculture business operators are required to have traceability procedures on the ingredients, raw materials and fishery and aquaculture products at all stages of processing and production.

To implement this at the farm level, movement control records kept for traceability purposes include hatchery accreditation/registration, number of hatcheries/farms, source of fry declaration and health certificate, sales invoices/receipts and name of buyers.

GAqP guidance on documentation and record keeping has been developed and will be disseminated to aquaculture farms along with training.

Movement control system is operated on a self-regulated basis. The team noted that only registered production premises complied with the movement control procedures for export purposes only.

BFAR had no active operational internal border control or other extended capacity to regulate the system beyond registered premises. BFAR staff responsible for regulating aquatic animal health did not gather and analyze intelligence information on the movement of animals between private enterprises within and among regions.

The current traceability system is not functional for the purposes of aquatic animal health management.

Strengths:

- There is a basic system in place that functions for aquatic animal health purposes for registered/accredited fish and shrimp hatcheries and export premises only.

Weaknesses:

- Intra and inter-regional traceability capability is limited for sea and air movement into major ports and movement control overland was found to be unregulated, with the exception of registered premises transferring aquatic animals for grow-out and export.

Recommendations:

- BFAR should conduct a risk analysis or review on the need and feasibility of a national movement control system under the existing administrative structure.

	Levels of advancement	
II-12. Traceability **B. Traceability of products of aquatic animal origin** *The authority and capability of the VS or AAHS, normally in coordination with producers and other interested parties, to trace products of aquatic animal origin for the purpose of food safety, aquatic animal health or trade.*	1.	The VS or AAHS do not have the authority or the capability to trace products of aquatic animal origin.
	2.	**The VS or AAHS can trace some products of aquatic animal origin to deal with a specific problem (e.g. products originating from farms affected by a disease outbreak).**
	3.	The VS or AAHS have implemented procedures to trace some products of aquatic animal origin for food safety, aquatic animal health and trade purposes, in accordance with relevant international standards.
	4.	The VS or AAHS have implemented national programmes enabling them the tracing of all products of aquatic animal origin, in accordance with relevant international standards.
	5.	The VS or AAHS periodically audit the effectiveness of their traceability procedures.

[Note this CC may in some countries be undertaken by an agency or agencies other than the VS or AAHS.]Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.2; E.7; E.25.

Findings:

The findings of criteria II-12 A, being specifically for export premises, are also relevant to this criterion.

Products passing through registered processors can be traced back to registered aquaculture premises. However, for the majority of supply to the domestic market (non-registered farms), traceability is unregulated.

The team noted there are no formal traceability systems in place for domestic potentially high-risk unprocessed stock feeds, for example, trash fish and other foodstuffs of aquatic origin, with the exception of influents for aquatic animal feed manufacturers.

Strengths:

- There is a basic system in place that functions for aquatic animal health purposes for registered/accredited fish and shrimp hatcheries and fish farming operations for movement to processing premises for export.

Weaknesses:

- Traceability of aquatic animals for aquatic animal health purposes back to the primary source of production is not possible, with the exception of shrimp products and finfish products derived from registered premises for processing and export. It must be highlighted that <10% of fish farms are registered nationally.

Recommendations:

- BFAR should conduct a risk analysis on the need and feasibility of a national movement control system under the existing administrative structure.

	Levels of advancement	
II-13 Welfare of farmed fish *The authority and capability of the VS or AAHS to implement the OIE standards for the welfare of farmed fish as published in the Aquatic Code.*	**1**	**There is no national legislation on welfare of farmed fish.**
	2.	There is national welfare of farmed fish legislation for some sectors.
	3.	In conformity with OIE standards welfare of farmed fish is implemented for some sectors (e.g. for the export sector).
	4.	Welfare of farmed fish is implemented in conformity with all relevant OIE standards.
	5.	Welfare of farmed fish is implemented in conformity with all relevant OIE standards and programmes are subjected to regular audits.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.26.

Findings:

No aquatic animal welfare programs have been implemented.

III.3 Fundamental component III: Interaction with interested parties

This component of the evaluation concerns the capability of the VS to collaborate with and involve interested parties in the implementation of programmes and activities. It comprises eight critical competencies

Critical competencies:

Section III-1	**Communication**
Section III-2	**Consultation with interested parties**
Section III-3	**Official representation**
Section III-4	**Accreditation / Authorisation / Delegation**
Section III-5	**Veterinary Statutory Body (VSB) and other professional authorities** **A. VSB authority** **B. VSB capacity** **C. Other professional authorities**
Section III-6	**Participation of producers and interested parties in joint programmes**

***Aquatic Code* references:**

Points 6, 7, 9, and 13 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / General organisation / Procedures and standards / Communication.

Chapter 3.2. on Communication.

***Terrestrial Code* references:**

Point 9 of Article 3.2.1. on General considerations.

Points 2 and 7 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services.

Sub-point b) of Point 2 of Article 3.2.6. on Administrative resources: Communications.

Article 3.2.11. on Participation on OIE activities.

Article 3.2.12. on Evaluation of the veterinary statutory body.

Points 4, 7 and Sub-point g) of Point 9 of Article 3.2.14. on Administration details / Animal health and veterinary public health controls / Sources of independent scientific expertise.

III-1. Communication	Levels of advancement
The capability of the VS or AAHS to keep interested parties informed, in a transparent, effective and timely manner, of VS or AAHS activities and programmes, and of developments in aquatic animal health and food safety. *This competency includes collaboration with relevant authorities, including other ministries and Competent Authorities, national agencies and decentralised institutions that share authority or have mutual interest in relevant areas*	1. The VS or AAHS have no mechanism in place to inform interested parties of VS or AAHS activities and programmes. 2. The VS or AAHS have informal communication mechanisms. **3. The VS or AAHS maintain an official contact point for communication but it is not always up-to-date in providing information.** 4. The VS or AAHS contact point for communication provides up-to-date information, accessible via the Internet and other appropriate channels, on activities and programmes. 5. The VS or AAHS have a well-developed communication plan, and actively and regularly circulate information to interested parties.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1d; E14; EM.3; H.2; H.9.

Findings:

Communication mechanisms are both formal and informal and vary from region to region, but otherwise adequate.

BFAR publish information relevant to the organization such as an annual report and relevant instructional and informative literature.

BFAR maintain a list of organizations involved in aquatic animal production.

BFAR collaborate closely with other agencies to fulfil core functions and service the needs of stakeholders.

According to the 2011 BFAR Annual Report[45], the following are some of the information activities undertaken:

- **Provision of Training and Technical Assistance**
  - *Conducted 1,333 training courses on aquaculture (tilapia, bangus, seaweeds), municipal, regulatory and post harvest technologies nationwide that benefited 40,303 participants (34,532 fisher folk and 5,771 extension personnel).*
  - *Provided 48,168 technical assistance and advisory services on aquaculture development and methods, marine fisheries management and conservation, fishing technologies, post-harvest technologies. Beneficiaries totalled to 57,353 individuals composed of fisher folk, fish farmers, LGUs, other NGAs and various stakeholders.*
- **Establishment of Techno-Demo Projects**
  - *Established 809 techno-demo projects that showcased various fishery technologies such as pond culture technology, aquasilviculture, shellfish culture, and fish polyculture with a total of 1,374 beneficiaries. Another 192 techno-demo projects were established through counter parting with the local government units with 387 beneficiaries.*
- **Project Launching and Conduct of Field Days**
  - *45 projects were launched while 79 field days were conducted.*

[45] EM.3

- **Dissemination/Provision of IEC Materials**
  - *Reproduced, packaged and distributed 263,651 copies of fisheries information, education and communication (IEC) materials to create awareness and to promote the Bureau's programs and projects; 553 billboards were installed while 406 radio and TV plugs were aired to inform the public of the latest development/issues besetting fisheries.*

Strengths:

- The BFAR has an extensive information and extension programme for interested parties, however aquatic animal disease information and management seems not to be a priority focus.
- The BFAR website is user-friendly and appropriately informative for public access purposes.

Recommendations:

- BFAR should make use of its extensive information and extension programmes to target aquatic animal disease information, such as disease prevention, control and eradication measures. Specifically the dire need for bio-security measures needs to be addressed as a high priority throughout the aquatic farming and food chain.

III-2. Consultation with interested parties *The capability of the VS or AAHS to consult effectively with interested parties on VS or AAHS activities and programmes, and on developments in aquatic animal health and food safety.* *This competency includes collaboration with relevant authorities, including other ministries and Competent Authorities, national agencies and decentralised institutions that share authority or have mutual interest in relevant areas*	Levels of advancement
	1. The VS or AAHS have no mechanisms for consultation with interested parties.
	2. The VS or AAHS maintain informal channels of consultation with interested parties.
	3. The VS or AAHS maintain a formal consultation mechanism with interested parties.
	4. The VS or AAHS regularly hold workshops and meetings with interested parties.
	5. The VS or AAHS actively consult with and solicit feedback from interested parties regarding proposed and current activities and programmes, developments in aquatic animal health and food safety, interventions at the OIE (Codex Alimentarius Commission and WTO SPS Committee where applicable), and ways to improve their activities.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1d; E15; PP.2; H.3.

Findings:

BFAR has active communication channels with national organizations involved in aquatic animal production industries, holds regular workshops, facilitate national stakeholder meetings, disseminate information, and has research extension activities.

The Team met with industry organizations and various levels of local government, including; the Taal Lake Aquaculture Alliance. Philippine Tropical Fish Exporters Association; Negros Prawn Producers Cooperative; CDO Mariculture Marine Park Industry Group and Local Government Units.

The Team noted that BFAR regional staff was well known to all public and private sector parties.

Strengths:

- BFAR have developed close working relationships with some interested parties and organize regular workshops and meetings (see detail for 2011 in CC III-1 above)

III-3. Official representation	Levels of advancement
The capability of the VS or AAHS to regularly and actively participate in, coordinate and provide follow-up on relevant meetings of regional and international organisations including the OIE (and Codex Alimentarius Commission and WTO SPS Committee where applicable).	1. The VS or AAHS do not participate in or follow up on relevant meetings of regional or international organisations.
	2. The VS or AAHS sporadically participate in relevant meetings and/or make a limited contribution.
	3. The VS or AAHS actively participate[46] in the majority of relevant meetings.
	4. The VS or AAHS consult with interested parties and take into consideration their opinions in providing papers and making interventions in relevant meetings.
	5. The VS or AAHS consult with interested parties to ensure that strategic issues are identified, to provide leadership and to ensure coordination among national delegations as part of their participation in relevant meetings.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence:E.1a; E.2; E.21; E.26; EM.3.

Findings:

BFAR-Fish Health Management and Quality Assurance Section (FHMQAS) representatives attend relevant regional and international meetings and the Team was informed that such action was on an ongoing basis. Some such examples are[47]:

- **OIE organized meetings:**
  - OIE Regional Commission for Asia, the Far East and Oceania
  - OIE Focal Point meetings for Aquatic Animal Diseases
- **Bilateral Cooperation on Fisheries**
  - Organized and hosted the 1st Meeting of the Fisheries Joint Committee under the Memorandum of Agreement on Bilateral Cooperation in the Field of Fisheries between the Government of the Republic of the Philippines and the Socialist Republic of Vietnam on July 21-22, 2011
  - Attended Inter-Agency Meeting of the Joint Commission for Bilateral Cooperation between the Republic of the Philippines and the Republic of Indonesia. Conducted by the Department of Foreign Affairs on November 10, 2011.
- **Others:**
  - Three BFAR personnel, one NFRDI personnel and two private sector representatives from Mindanao and Palawan was sent to Japan to attend the Programme for 'Sustainable Development of Marine Resources for BIMP-EAGA' under the JENESYS Programme on March 5-13, 2011
  - SEAFDEC Council Meeting held in Manila on November 17, 2011.

Codex meetings are attended by a representative of the Department of Agriculture.

BFAR-FHMQAS representatives do not attend the OIE General Session as the OIE delegate resides directly within the Department of Agriculture.

The OIE Focal Point for Aquatic Animal Diseases resides within BFAR and attends relevant OIE meetings including regional meetings associated with NACA.

A BFAR-FHMQAS representative collates OIE reporting information for aquatic animal disease for input into WAHIS on behalf of the OIE delegate.

[46] *Active participation* refers to preparation in advance of, and contributing during the meetings in question, including exploring common solutions and generating proposals and compromises for possible adoption.

[47] EM.3

Recommendations

- BFAR-FHMQAS representative to attend to OIE General Sessions as a member of the Philippine delegation when applicable to the Session's agenda.
- The BFAR-FHMQAS representative to attend OIE training workshops on WAHIS.

III-4. Accreditation / authorisation / delegation *The authority and capability of the public sector of the VS or AAHS to accredit / authorise / delegate the private sector (e.g. private veterinarians, aquatic animal health professionals and laboratories), to carry out official tasks on its behalf.*	Levels of advancement
	1. The public sector of the VS or AAHS has neither the authority nor the capability to accredit / authorise / delegate the private sector to carry out official tasks.
	2. The public sector of the VS or AAHS has the authority and capability to accredit / authorise / delegate to the private sector, but there are no current accreditation / authorisation / delegation activities.
	3. The public sector of the VS or AAHS develops accreditation / authorisation / delegation programmes for certain tasks, but these are not routinely reviewed.
	4. The public sector of the VS or AAHS develops and implements accreditation / authorisation / delegation programmes, and these are routinely reviewed.
	5. The public sector of the VS or AAHS carries out audits of its accreditation / authorisation / delegation programmes, in order to maintain the trust of their trading partners and interested parties.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence:E.1a; E.1c; E.15.

Findings:

BFAR have the authority and capability for accreditation, authorisation and delegation.

The BFAR public and private laboratories are independent and operate based on their individual organizational structure, administration and services. The FHMQAL has a system to recognize private laboratories for the following purposes:

- analysis for official samples;
- accept results of analysis for regulatory purposes, provided, it conform with the standard set by the government;
- subcontract analysis to for where government has no capability.

The conditions on the recognition is indicated in a Memorandum of Agreement where control of the government on the analysis is included. The recognized laboratory must provide access for audit by BFAR and trading partner upon request.

Table 18. BFAR Recognized private laboratories:

Laboratory	Address	Field of Expertise
Negros Prawn Producers Cooperative Diagnostic and Analytical Laboratory (NPPC)	Door 1 & 2 NEDF Bldg., 6th Lacson St., Bacolod City, Negros Occidental	Diagnostic Services
Southeast Asia Fisheries Development Center (SEAFDEC)	Tigbauan, Iloilo	Research
SGS Philippines, Inc. Central Laboratory	2/F 2229 Chino Roces Avenue,Makati City	Chemical Testing (Residues & Contaminants)
SENTROTEK	Wack-Wack, Mandaluyong	Chemical Testing (Residues & Contaminants)

The Team could not identify any other accredited private sector operatives in the Philippines for aquatic animal health activities.

	Levels of advancement	
III-5 Veterinary Statutory Body (VSB) and other professional authorities	1.	There is no legislation establishing a *VSB*.
	2.	The *VSB* regulates *veterinarians* only within certain sectors of the veterinary profession and/or does not systematically apply disciplinary measures.
A. VSB authority	**3.**	**The *VSB* regulates *veterinarians* in all relevant sectors of the veterinary profession and applies disciplinary measures.**
The VSB is an autonomous regulatory body for veterinarians. Its role is defined in the Terrestrial Code.	4.	The *VSB* regulates functions and competencies of *veterinarians* in all relevant sectors and *veterinary para-professionals* according to needs.
	5.	The *VSB* regulates and applies disciplinary measures to *veterinarians* and *veterinary para-professionals* in all sectors throughout the country.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence:EM.4; EM.5; www.prc.gov.ph

Findings:

The Philippine Regulatory Board of Veterinary Medicine(PRBVM) of the Professional Regulation Commission (PRC) is the 'Veterinary Statutory Body' of the Philippines. This board is under the administrative supervision and direct control of the PRC, the government agency responsible for delivering and maintaining professional standards, including providing professional examinations.

The practice of veterinary medicine in the country was first regulated when Public Act No. 2245 was enacted on February 11, 1913, creating the Veterinary Examining Board. Composed of members appointed by the Governor- General, the Board was placed under the administrative supervision of the Director of Agriculture.

With the enactment of Public Act No. 4007, the Board was placed under the Department of Agriculture and Commerce, and its members were appointed by the Department Secretary.

On June 18, 1949, P.A. 2245 was superseded by Republic Act No. 3892, otherwise known as "An act to Regulate the Practice of Veterinary Medicine and Surgery in the Philippines." The Code of Ethics for the veterinary medicine profession was ratified by the members of the Philippine Veterinary Medical Association, Inc. on its Annual Convention on February 23, 1992.

Republic Act No. 9268, or the Philippine Veterinary Medicine Act of 2004 is the act which regulates the practice of veterinary medicine in the country. This Act provides the appropriate mandate for the Board of Veterinary Medicine as the 'Implementing Rules and Regulations' (IRR). The composition, term of office and the powers, duties and responsibilities of the Board of Veterinary medicine are specified in the IRR.

The Professional Regulatory Board of Veterinary Medicine (PRBVM) is composed of a Chairman and two members appointed by the President of the Philippines. Meetings are held monthly. The Board is selected from a list of persons nominated by the Philippine Veterinary Medical Association (PVMA), the accredited professional organisation of veterinarians.

The PRBVM exercises the following authority[48]:

> *A person shall be regarded as practicing veterinary medicine and surgery who shall append or cause to be appended to his name the letters V.S., D.V.M., V.M.D., M.D.C., D.V.S., or the words "Veterinary," "Veterinarian," "Veterinary surgeon," "Veterinary dentist," or any other initials or title implying qualifications to so practice, or who shall treat, operate on, or prescribe for any physical ailment in, or any physical injury to, or deformity of, any domestic animals , for which he shall receive any monetary compensation.*

The level of advancement accorded by the 2008 OIEPVS Evaluation of Level 4 is not confirmed by the Team, as veterinary para-professionals cannot be addressed by the PRBVM.

Strengths:

- The existence of a government regulatory body, although not complying with all the relevant OIE Code standards such as composition and representation of the body´s membership, autonomy, accountability, etc.

[48] www.prc.gov.ph

	Levels of advancement
III-5 Veterinary Statutory Body (VSB) and other professional authorities **B. VSB capacity** *The capacity of the VSB to implement its functions and objectives in conformity with OIE standards.*	1. The *VSB* has no capacity to implement its functions and objectives.
	2. The *VSB* has the functional capacity to implement its main objectives.
	3. The *VSB* is an independent representative organisation with the functional capacity to implement all of its objectives.
	4. The *VSB* has a transparent process of decision making and conforms to OIE standards.
	5. The financial and institutional management of the *VSB* is submitted to external auditing.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence:EM.4; EM.5

Findings:

Republic Act No. 9268, or the Philippine Veterinary Medicine Act of 2004 is the act which regulates the practice of veterinary medicine in the country. This Act provides for and shall govern[49]:

> *(a) The Administration and conduct of licensure examination, registration and licensing of veterinarians*
> *(b) The supervision and regulation of the practice of veterinary medicine;*
> *(c) The integration of veterinarians under the existing accredited professional association; and*
> *(d) The development of the professional competence of veterinarians through continuing professional education(CPE) in accordance with the guidelines set by the Professional Regulation Commission (PRC).*

The PRBVM is established under the PRC and has the functional capacity to implement its main objectives, however is as such not an independent representative organisation in accordance with the OIE Code standards.

Weaknesses:

- The PRBVM is not in accordance with the OIE Code standards.

[49]www.prc.gov.ph

	Levels of advancement
III-5 Veterinary Statutory Body (VSB) and other professional authorities	1. There is no legislation establishing other professional authorities and no capacity to implement its functions and objectives.
	2. The other professional authority has functional capacity to implement its main objectives. It regulates aquatic animal health professionals within certain sectors of the AAH profession and/or does not systematically apply disciplinary measures.
C. Other professional authorities *Other professional authorities with the responsibility, authority and capacity for the regulation of aquatic animal health professionals.*	3. The other professional authority is an independent representative organisation with the functional capacity to implement all of its objectives. It regulates aquatic animal health professionals within all aquatic animal health sectors and applies disciplinary measures.
	4. The other professional authority has a transparent process of decision making. It regulates functions and competencies of aquatic animal health professionals in all relevant sectors according to needs.
	5. The other professional authority's financial and institution management is submitted to external auditing. It regulates and applies disciplinary measures to aquatic animal health professionals in all sectors throughout the country.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence:E.1a; EM.5.

Findings:

The Professional Regulation Commission(PRC)[50]is responsible for the administration, implementation and enforcement of regulatory policies on the regulation and licensing of various professions and occupations under its jurisdiction.

Under the Commission are the forty-six (46) Professional Regulatory Boards which exercise administrative, quasi-legislative, and quasi-judicial powers over their respective professions. The 46 PRBs which were created by separate enabling laws, perform these functions subject to review and approval by the Commission:

- Prepare the contents of licensure examinations. Determine, prescribe, and revise the course requirements
- Recommend measures necessary for advancement in their fields
- Visit / inspect schools and establishments for feedback
- Adopt and enforce a Code of ethics for the practice of their respective professions
- Administer oaths and issue Certificate of Registration
- Investigate violations of set professional standards and adjudicate administrative and other cases against erring registrants
- Suspend, revoke, or reissue Certificate of Registration for causes provided by law

One of the 46 boards is the **Board of Fisheries Technologists**. The Board was created by the Professional Regulation Commission in 2000 by issuing PRC Resolution 2000-664, Series of 2000, in May 2000, using Republic Act No. 8550 (Fisheries Code of 1998) as the legal basis.

Subjects for the annual licensure examination do not contain any reference to aquatic animal health[51].

There is no requirement for professional registration renewal based on competency.

[50]www.prc.gov.ph
[51] http://www.prc.gov.ph/uploaded/documents/Fisheries1012_BoardProgram_02.pdf8021

An annual registration fee is the only pre-requisite for licence renewal

All fisheries officers working for BFAR must pass the relevant PRC board examination to be licensed as a professional Fisheries Technologist.

Strengths:

- The existence of a government regulatory body for Fisheries Technologists.

III-6 Participation of producers and other interested parties in joint programmes *The capability of the VS or AAHS and producers and interested parties to formulate and implement joint programmes in regard to aquatic animal health and food safety.* *This competency includes collaboration with relevant authorities, including other ministries and Competent Authorities, national agencies and decentralised institutions that share authority or have mutual interest in relevant areas*	Levels of advancement
	1. Producers and other interested parties only comply and do not actively participate in programmes.
	2. Producers and other interested parties are informed of programmes and assist the VS or AAHS to deliver the programme in the field.
	3. Producers and other interested parties are trained to participate in programmes and advise of needed improvements, and participate in early detection of *diseases*.
	4. Representatives of producers and other interested parties negotiate with the VS or AAHS on the organisation and delivery of programmes.
	5. Producers and other interested parties are formally organised to participate in developing programmes in close collaboration with the VS or AAHS.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence:E.14; EM.3 & 4; PP.12.

Findings:

The Team noted private stakeholder bodies including: the Negros Prawn Producers Cooperative and the CDO-Mariculture Marine Park Industry Group who collaborated closely with BFAR on programs relevant to aquatic animal health.

BFAR assists Local Government Units (LGU´s) through joint programmes in developing their technical capability in the development, management, regulation, conservation and protection of the fishery resources.

Other such initiatives are[52]

Maintenance of Bangus and Tilapia Satellite Hatcheries

- Maintained bangus hatcheries located at NIFTDC, Bonuan, Binloc, Dagupan City; Calape, Bohol; Sta. Lucia, Pto. Princesa, Palawan; Guiuan, Samar; and Sagay, Camiguin;
- Maintained 16 tilapia hatcheries

Strengths:

- BFAR have developed an effective participation management procedure for implementing extension programs relevant to aquatic animal health with relevant interested parties.

[52]EM.3

III.4 Fundamental component IV: Access to markets

This component of the evaluation concerns the authority and capability of the VS to provide support in order to access, expand and retain regional and international markets for animals and animal products. It comprises eight critical competencies.

Critical competencies:

Section IV-1	**Preparation of legislation and regulations**
Section IV-2	**Implementation of legislation and regulations and compliance thereof**
Section IV-3	**International harmonisation**
Section IV-4	**International certification**
Section IV-5	**Equivalence and other types of sanitary agreements**
Section IV-6	**Transparency**
Section IV-7	**Zoning**
Section IV-8	**Compartmentalisation**

Aquatic Code Reference(s):

Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / General organisation / Procedures and standards.

Chapter 4.1. on Zoning and compartmentalisation.

Chapter 4.2. on Application of compartmentalisation.

Chapter 5.1. on General obligations related to certification.

Chapter 5.2. on Certification procedures.

Article 2.1.2. on The Agreement on the Application of Sanitary and Phytosanitary Measures and role and responsibility of the OIE.

Chapter 5.10. on Model health certificates for international trade in live aquatic animals and products of aquatic animal origin.

***Terrestrial Code* References**:

Points 1 and 2 of Article 3.2.7. on Legislation and functional capabilities: Animal health, animal welfare and veterinary public health / Export/import inspection.

Points 1 and 3 of Article 3.2.8. on Animal health controls: Animal health status / National animal disease reporting systems.

Sub-point g) of Point 4 of Article 3.2.10. on Veterinary Services administration: Trade performance history.

Article 3.2.11. on Participation in OIE activities.

Points 6 and 10 of Article 3.2.14. on Veterinary legislation, regulations and functional capabilities / Membership of the OIE.

IV-1. Preparation of legislation and regulations *The authority and capability of the VS or AAHS to actively participate in the preparation of national legislation and regulations in domains that are under their mandate, in order to guarantee its quality with respect to principles of legal drafting and legal issues (internal quality) and its accessibility, acceptability, and technical, social and economical applicability (external quality).* *This competency includes collaboration with relevant authorities, including other ministries and Competent Authorities, national agencies and decentralised institutions that share authority or have mutual interest in relevant areas*	Levels of advancement
	1. The VS or AAHS have neither the authority nor the capability to participate in the preparation of national legislation and regulations, which result in legislation that is lacking or is out-dated or of poor quality in most fields of VS or AAHS activity.
	2. The VS or AAHS have the authority and the capability to participate in the preparation of national legislation and regulations and can largely ensure their internal quality, but the legislation and regulations are often lacking in external quality.
	3. The VS or AAHS have the authority and the capability to participate in the preparation of national legislation and regulations, with adequate internal and external quality in some fields of activity, but lack formal methodology to develop adequate national legislation and regulations regularly in all domains.
	4. The VS or AAHS have the authority and the capability to participate in the preparation of national legislation and regulations, with a relevant formal methodology to ensure adequate internal and external quality, involving participation of interested parties in most fields of activity.
	5. The VS or AAHS regularly evaluate and update their legislation and regulations to maintain relevance to evolving national and international contexts.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence: E.1a; E.14; E.15, PP.7

Findings:

The BFAR Legal Division competently engages in the preparation of legislation and regulations at all government administrative levels.

The Team was informed that BFAR engages in an inter-active consultative process with interested relevant parties.

The functions of the BFAR –Legal Division are, inter alia[53]:

- Review joint fishing agreements between Filipino citizens and foreigners who conduct fishing activities in international waters and ensure that such agreements are not contrary to Philippine commitment under international treaties and convention on high seas fishing;
- Conduct legal researches, provide advisory services and render opinions on fishery laws, rules and regulations;
- Formulate and review all rules and regulations governing the conservation and management of all fishery resources, as recommended by the technical divisions and the National Fisheries Research and Development Institute (NFRDI);
- Assist LGUs in developing their technical capability in the regulation of their fishery resources thru the drafting of their municipal/city fishery ordinances;
- Formulate rules and regulations for the conservation and mgt. of straddling fish stocks & highly migratory fish stocks as recommended by the technical divisions and the NFRDI.

[53] PP.7

The following are the respective legal jurisdiction as far as the fisheries sector is concerned:

- Local Government Units (LGUs) - if within municipal waters
- **Bureau of Fisheries and Aquatic Resources (BFAR**)- if outside of the municipal waters
- Other special agencies - as may be designated by law, e. g.: Palawan Council for Sustainable Development (PCSD), Laguna Lake Development Authority (LLDA)

IV-2. Implementation of legislation and regulations and compliance thereof *The authority and capability of the VS or AAHS to ensure compliance with legislation and regulations under the VS or AAHS mandate.*	Levels of advancement
	1. The VS or AAHS have no or very limited programmes or activities to ensure compliance with relevant legislation and regulations.
	2. The VS or AAHS implement a programme or activities comprising inspection and verification of compliance with legislation and regulations and recording instances of non-compliance, but generally cannot or do not take further action in most relevant fields of activity.
	3. Relevant legislation is generally implemented. As required, the VS or AAHS have a power to take legal action / initiate prosecution in instances of non-compliance in most relevant fields of activity.
	4. Relevant legislation is implemented in all domains of competence and the VS or AAHS work to minimise instances of non-compliance.
	5. The compliance programme is regularly subjected to audit by the VS or AAHS or external agencies.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence:E.1a; E.14; E.15.

Findings:

The Team noted that the relevant legislation as far as the export fisheries sector is concerned is generally implemented.

Registration of aquaculture facilities is only required for premises engaged in export activities, otherwise registration is voluntary.

The Team were informed that non-compliance may result in de-registration of a facility, however, there were no examples of recent regulation enforcement activities in aquatic animal health.

The QRT is responsible for regulated emergency aquaculture-related responses, such as for example fish kills, employing BFAR human resources when and if required.

The Team´s accordance of the level of advancement for this criterion was based on evidence provided related to the export of fish and fishery products for human consumption.

Strengths:

- BFAR have a comprehensive and effective inspection and monitoring programme for compliance with BFAR regulations for the export of aquatic products for human consumption.

IV-3. International harmonisation *The authority and capability of the VS or AAHS to be active in the international harmonisation of regulations and sanitary measures and to ensure that the national legislation and regulations under their mandate take account of relevant international standards, as appropriate.*	Levels of advancement
	1. National legislation, regulations and *sanitary measures* under the mandate of the VS or AAHS do not take account of international standards.
	2. The VS or AAHS are aware of gaps, inconsistencies or non-conformities in national legislation, regulations and *sanitary measures* as compared to international standards, but do not have the capability or authority to rectify the problems.
	3. The VS or AAHS monitor the establishment of new and revised international standards, and periodically review national legislation, regulations and *sanitary measures* with the aim of harmonising them, as appropriate, with international standards, but do not actively comment on the draft standards of relevant intergovernmental organisations.
	4. The VS or AAHS are active in reviewing and commenting on the draft standards of relevant intergovernmental organisations.
	5. The VS or AAHS actively and regularly participate at the international level in the formulation, negotiation and adoption of international standards[54], and use the standards to harmonise national legislation, regulations and *sanitary measures*.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence:E.21.

Findings:

The Team noted that International harmonisation activities such as monitoring new or revised international standards and the possibility of incorporating them in national legislation are conducted on an ad-hoc basis. For this purpose a Technical Working Group may be convened. An example given was the to-be-drafted joint DoH-FDA and DA-BFAR Administrative Order for veterinary medicinal products that are intended for use in aquaculture.

The OIE Aquatic Code 2012 is available at BFAR-FHMQAS.

There is no staff at the BFAR with dedicated duties to negotiate against international standards.

[54] A country could be active in international standard setting without actively pursuing national changes. The importance of this element is to promote national change.

	Levels of advancement
IV-4 International certification[55] *The authority and capability of the VS or AAHS to certify aquatic animals, aquatic animal products, services and processes under their mandate, in accordance with the national legislation and regulations, and international standards.*	1. The VS or AAHS have neither the authority nor the capability to certify *aquatic animals*, *aquatic animal products*, services or processes.
	2. The VS or AAHS have the authority to certify certain *aquatic animals*, *aquatic animal products*, services and processes, but are not always in compliance with the national legislation and regulations and international standards.
	3. The VS or AAHS develop and carry out certification programmes for certain *aquatic animals*, *aquatic animal products*, services and processes under their mandate in compliance with international standards.
	4. The VS or AAHS develop and carry out all relevant certification programmes for any *aquatic animals*, *aquatic animal products*, services and processes under their mandate in compliance with international standards.
	5. The VS or AAHS carry out audits of their certification programmes, in order to maintain national and international confidence in their system.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence:E.21; E.26.

Findings:

The development of the health certificates is conducted at the central office and in at least one Region personnel have been delegated the authority to sign export certificates for products to the EU.

All other export certificates are signed by the central FHMQAS unit director.

The Team noted that **in some instances export certification did not comply with the requirements of the importing country.**

Weaknesses:

- Health certification procedures (including laboratory testing requirements) for export of aquatic animal products for human consumption are not efficient enough for the demands, volume, frequency and logistics of the current regional and international markets.

Recommendations

- The team recommends a review of procedures regarding international certification for aquatic animals and products in compliance with OIE standards.
- BFAR to develop the skills and administrative procedures required to effectively negotiate on import/export countries certification requirements with the relevant competent authorities and against the international standards.

[55] Certification procedures should be based on relevant OIE and Codex Alimentarius standards.

	Levels of advancement	
IV-5. Equivalence andother types of sanitary agreements *The authority and capability of the VS or AAHS to negotiate, implement and maintain equivalence and other types of sanitary agreements with trading partners*	1.	The VS or AAHS have neither the authority nor the capability to negotiate or approve equivalence or other types of sanitary agreements with other countries.
	2.	**The VS or AAHS have the authority to negotiate and approve equivalence and other types of sanitary agreements with trading partners, but no such agreements have been implemented.**
	3.	The VS or AAHS have implemented equivalence and other types of sanitary agreements with trading partners on selected *aquatic animals*, *aquatic animal products* and processes.
	4.	The VS or AAHS actively pursue the development, implementation and maintenance of equivalence and other types of sanitary agreements with trading partners on all matters relevant to *aquatic animals*, *aquatic animal products* and processes under their mandate.
	5.	The VS or AAHS actively work with interested parties and take account of developments in international standards, in pursuing equivalence and other types of sanitary agreements with trading partners.

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence:E.21; E.26.

Findings:

The team found no evidence of negotiation for equivalence or other types of sanitary agreements for aquatic animal health issues with trading partners.

IV-6. Transparency *The authority and capability of the VS or AAHS to notify the OIE of their sanitary status and other relevant matters (and to notify the WTO SPS Committee where applicable), in accordance with established procedures.*	Levels of advancement
	1. The VS or AAHS do not notify.
	2. The VS or AAHS occasionally notify.
	3. The VS or AAHS notify in compliance with the procedures established by these organisations.
	4. The VS or AAHS regularly informs interested parties of changes in their regulations and decisions on the control of relevant *diseases* and of the country's sanitary status, and of changes in the regulations and sanitary status of other countries.
	5. The VS or AAHS or, in cooperation with their stakeholders, carry out audits of their transparency procedures.

Terrestrial and Aquatic Code reference(s): Annex.1

Evidence: OIE website; E1.c

Findings:

The Philippines notify the OIE in compliance with the laid-down procedures.

IV-7. Zoning *The authority and capability of the VS or AAHS to establish and maintain disease free zones, as necessary and in accordance with the criteria established by the OIE (and by the WTO SPS Agreement where applicable)*	Levels of advancement
	1. The VS or AAHS cannot establish disease free *zones*.[56]
	2. As necessary, the VS or AAHS can identify *aquatic animal* sub-populations with distinct health status suitable for zoning.
	3. The VS or AAHS have implemented biosecurity measures that enable it to establish and maintain disease free *zones* for selected *aquatic animals* and *aquatic animal products*, as necessary.
	4. The VS or AAHS collaborate with producers and other interested parties to define responsibilities and execute actions that enable it to establish and maintain disease free *zones* for selected *aquatic animals* and *aquatic animal products*, as necessary.
	5. The VS or AAHS can demonstrate the scientific basis for any disease free *zones* and can gain recognition by trading partners that they meet the criteria established by the OIE (and by the WTO SPS Agreement where applicable).

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence:E1.e; E.26.

Findings:

Not applicable at this stage.

[56] If the VS or AAHS has the authority and capability but chooses not to implement zoning, this CC should be recorded as “not applicable at this stage”.

IV-8. Compartmentalisation *The authority and capability of the VS or AAHS to establish and maintain disease free compartments as necessary and in accordance with the criteria established by the OIE (and by the WTO SPS Agreement where applicable).*	Levels of advancement
	1. The VS or AAHS cannot establish disease free *compartments*.[57].
	2. As necessary, the VS or AAHS can identify aquatic animal sub-populations with a distinct health status suitable for compartmentalisation.
	3. The VS or AAHS ensure that biosecurity measures to be implemented to enable it to establish and maintain disease free *compartments* for selected *aquatic animals* and *aquatic animal products*, as necessary.
	4. The VS or AAHS collaborate with producers and other interested parties to define responsibilities and execute actions that enable it to establish and maintain disease free *compartments* for selected *aquatic animals* and *aquatic animal products*, as necessary.
	5. The VS or AAHS can demonstrate the scientific basis for any disease free *compartments* and can gain recognition by other countries that they meet the criteria established by the OIE (and by the WTO SPS Agreement where applicable).

Terrestrial and Aquatic Code reference(s): Annex 1

Evidence

E1.e; E.26.

Findings:

Not applicable at this stage.

[57] If the VS or AAHS has the authority and capability but chooses not to implement compartmentalization, this CC should be recorded as “not applicable at this stage”.

PART IV: CONCLUSIONS

The OIE Aquatic Animal Health Code 2012[58] defines "aquatic animal health services" as:

> *the governmental and non-governmental organizations that implement animal health and welfare measures and other standards and recommendations in the Aquatic Code in the territory. The Aquatic Animal Health Services are under the overall control and direction of the Competent Authority. Private sector organizations, veterinarians, aquatic animal health professionals or veterinary paraprofessionals are normally accredited or approved by the Competent Authority to deliver the delegated functions*

Based on the results of this OIE-PVS Evaluation of the AAHS of the Philippines, and the recommendations provided in the OIE Aquatic Code and Manual, the main conclusions are as follows:

- The Bureau of Fisheries and Aquatic Resources (BFAR) is the national implementing organization (Competent Authority) for all matters pertaining to aquatic animal health.
- The BFAR operates within a clearly defined legal framework regulating authority, responsibilities and functions and a clear and direct chain of command from the central level to regional level.
- The BFAR- FHMQAS personnel are dedicated and highly motivated in the performance of their duties.
- The Fish Health Management and Quality Assurance Section (FHMQAS) of BFAR – being the authority responsible for Aquatic Animal Health Services (AAHS) - undertakes a range of activities effectively, however, there appears to be no over-arching strategy providing direction and coordination for the responsibilities of the AAHS and formal strategic, directive or decision-making structures or capacity to make independent technical decisions in the national interest seem to be lacking. **Therefor a National Strategic Plan for AAH is needed to provide direction for all projects and activities relevant to AAH.**
- In order to comply with OIE Code Standards the AAHS of the Philippines should take due cognizance of endemic as well as exotic diseases in neighbouring countries and the respective geographical region and implement appropriate action. **The Team thus recommends a re-assessment of AAHSs aquatic animal disease control actions and priorities in respect of early disease detection and emergency response.**
- Recruitment, appointment and in-service regulations follow the standards laid down by the Civil Service Commission. However, **the Team noted with concern that the majority of AAHS personnel are appointed in non-permanent positions, negatively impacting on professional service delivery due to work overloads.** This is primarily due to permanent personnel having to perform multiple tasks which are not delegated to so called "casuals" or "job order" staff.

[58] E.26

PART V: APPENDICES

Appendix 1: Terrestrial and Aquatic Code references for critical competencies

Critical Competences	Terrestrial Code references	Aquatic Code reference
I.1.A **I.1.B** **I.2.A** **I.2.B**	Article 3.2.5. on Evaluation criteria for human resources. Article 3.2.12. on Evaluation of the veterinary statutory body. Points 1-2 and 5 of Article 3.2.14. on Organisation and structure of Veterinary Services / National information on human resources / Laboratory services	Points 1-7, 9 and 14 of Article 3.1.2. on Fundamental principles of quality: Professional judgement / Independence / Impartiality / Integrity / Objectivity./ Aquatic aninal health legislation and regulations /: General organisation / Procedures and standards / Human and financial resources
I.3	Article 3.2.5. on Evaluation criteria for human resources. Sub-point d) of Point 4 of Article 3.2.10. on Veterinary Services administration: In-service training and development programme for staff. Point 9 of Article 3.2.14. on Performance assessment and audit programmes.	Points 1, 7 and 14 of Article 3.1.2. on Fundamental principles of quality: Professional judgement / General organisation / Human and financial resources.
I.4		Point 2 of Article 3.1.2. on Fundamental principles of quality: Independence.
I.5	Point 1 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services. Point 9 of Article 3.2.14. on Performance assessment and audit programmes.	
I.6.A **I.6.B**	Article 3.2.2. on Scope. Points 1 and 2 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services. Point 4 of Article 3.2.10 on Performance assessment and audit programmes.	Points 6, 7, and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulation / General organisation / Procedures and standards.
I.7	Point 2 of Article 3.2.4. on Evaluation criteria for quality system: “Where the Veterinary Services undergoing evaluation… than on the resource and infrastructural components of the services”. Points 2 and 3 of Article 3.2.6. on Evaluation criteria for material resources: Administrative / Technical. Point 3 of Article 3.2.10. on Performance assessment and audit programmes: Compliance. Point 4 ofArticle 3.2.14. on Administration details.	
I.8 **I.9** **I.10**	Point 1 of Article 3.2.6. on Evaluation criteria for material resources: Financial. Point 3 of Article 3.2.14. on Financial management information.	Point 6 and 14 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulation/ Human and financial resources.
I.11	Point 4 of Article 3.2.1. on General considerations. Point 1 of Article 3.2.2. on Scope. Article 3.2.6. on Evaluation criteria for material resources. Article 3.2.10. on Performance assessment and audit programmes.	Points 7, 11 and 14 of Article 3.1.2. on Fundamental principles of quality: General organisation / Documentation / Human and financial resources.
II.1 **II.2**	Point 1 of Article 3.2.4. on Evaluation criteria for quality systems. Point 3 of Article 3.2.6. on Evaluation criteria for material resources: Technical. Point 5 of Article 3.2.14. on Laboratory services.	Point 9 of Article 3.1.2. on Fundamental principles of quality: Procedures and standards.
II.3		Section 2on risk analysis.
II.4	Point 2 of Article 3.2.7. on Legislation and functional capabilities: Export/import inspection. Points 6 and 7 of Article 3.2.14. on Veterinary legislation, regulations and functional capabilities / Animal health and veterinary public health controls.	Point 6 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulation / Procedures and standards.
II.5.A	Points 1-3 of Article 3.2.8. on Animal health controls: Animal health status / Animal health control / National	Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health

II.5.B **II.6** **II.7**	animal disease reporting systems. Sub-points a) i), ii) and iii) of Point 7 of Article 3.2.14. on Animal health: Description of and sample reference data from any national animal disease reporting system controlled and operated or coordinated by the Veterinary Services / Description of and sample reference data from other national animal disease reporting systems controlled and operated by other organisations which make data and results available to Veterinary Services / Description and relevant data of current official control programmes including:… or eradication programmes for specific diseases.	legislation and regulation/ General organisation / Procedures and standards. Chapter 1.4. on Aquatic animal health surveillance Chapter 4.6. on Handling, disposal and treatment of aquatic animal waste.
II.8	Points 1-5 of Article 3.2.9. on Veterinary public health controls: Food hygiene / Zoonoses / Chemical residue testing programmes / Veterinary medicines/ Integration between animal health controls and veterinary public health. Points 2, 6 and 7 of Article 3.2.14. on National information on human resources / Veterinary legislation, regulations and functional capabilities / Animal health and veterinary public health controls. Chapter 6.2. on Control of biological hazards of animal health and public health importance through ante- and post-mortem meat inspection.	Points 6, 7and9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulation / General organisation / Procedures and standards. **Codex Alimentarius Commission standards:** General Principles of Food Hygiene (CAC/RCP 1-1969). Code of practice for fish and fishery products (CAC/RCP 52-2003).
II.9	Points 3 and 4 of Article 3.2.9. on Veterinary public health controls: Chemical residue testing programmes / Veterinary medicines. Sub-point a) ii) of Point 6 of Article 3.2.14. on Animal health and veterinary public health: Assessment of ability of Veterinary Services to enforce legislation. Chapters 6.6. to 6.10. on Antimicrobial resistance.	Points 6 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / Procedures and standards. Chapter 6.2. on Introduction to the recommendations for controlling antimicrobial resistance. Chapter 6.3. on Principles for responsible and prudent use of antimicrobial agents in aquatic animals. Chapter 6.4. on Monitoring of the quantities and usage patterns of antimicrobial agents used in aquatic animals. Chapter 6.5. on Development and harmonisation of national antimicrobial resistance surveillance and monitoring programmes for aquatic animals.
II.10	Points 3 and 4 of Article 3.2.9. on Veterinary public health controls: Chemical residue testing programmes / Veterinary medicines. Sub-points b) iii) and iv) of Point 7 of Article 3.2.14. on Veterinary public health: Chemical residue testing programmes / Veterinary medicines. Chapters 6.6. to 6.10. on Antimicrobial resistance.	Points 3 and 4 of Article 3.2.9. on Veterinary public health controls: Chemical residue testing programmes / Veterinary medicines. Sub-points b) iii) and iv) of Point 7 of Article 3.2.14. on Veterinary public health: Chemical residue testing programmes / Veterinary medicines.
II.11		Chapter 6.1. on Control of hazards in aquatic animal feed
II.12	Point 3 of Article 3.2.8. on Animal health controls: National animal disease reporting systems. Sub-point f) of Point 4 of Article 3.2.10. on Veterinary Services administration: Formal linkages with sources of independent scientific expertise. Points 6 and 7 of Article 3.2.14. on Veterinary legislation, regulations and functional capabilities / Animal health and veterinary public health controls.	Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulation / General organisation / Procedures and standards
II.13		Chapter 7.1. Introduction to recommendations for the welfare of farmed fish Chapter 7.2. Welfare of farmed fish during transport Chapter 7.3. Welfare aspects of stunning and killing of farmed fish for human consumption Chapter 7.4. Killing of farmed fish for disease control purposes
III.1	Sub-point b) of Point 2 of Article 3.2.6. on Administrative resources: Communications. Point 4 of Article 3.2.14. on Administration details.	Point 13 of Article 3.1.2. on Fundamental principles of quality: Communication. Chapter 3.2. on Communication Sub-point b) of Point 2 of Article 3.2.6. on

		Administrative resources: Communications. Point 4 of Article 3.2.14. on Administration details.
III.2	Point 2 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services. Point 4 and Sub-point g) of Point 9 of Article 3.2.14. on Administration details and on Sources of independent scientific expertise.	Point 13 of Article 3.1.2. on Fundamental principles of quality: Communication. Chapter 3.2. on Communication
III.3	Article 3.2.11. on Participation on OIE activities. Point 4 of Article 3.2.14. on Administration details.	
III.4	Point 7 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services	Points 6, 7 and 8 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulation/ General organisation / Procedures and standards.
III.5	Point 6 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation. Point 9 of Article 3.2.1. on General considerations. Article 3.2.12. on Evaluation of the veterinary statutory body	Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / General organisation / Procedures and standards
III.6	Points 2 and 7 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services. Point 7 of Article 3.2.14. on Animal health and veterinary public health controls.	Point 6 and 13 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulation/ Communication.
IV.1 **IV-2**	Points 1 and 2 of Article 3.2.7. on Legislation and functional capabilities: Animal health, animal welfare and veterinary public health / Export/import inspection. Point 6 of Article 3.2.14. on Veterinary legislation, regulations and functional capabilities. Chapter 3.4.	Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / General organisation / Procedures and standards.
IV.3	Article 3.2.11. on Participation in OIE activities. Points 6 and 10 of Article 3.2.14. on Veterinary legislation, regulations and functional capabilities / Membership of the OIE.	Point 6 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulation.
IV.4	Point 2 of Article 3.2.7. on Legislation and functional capabilities: Export/import inspection. Sub-point b) of Point 6 of Article 3.2.14. on Veterinary legislation, regulations and functional capabilities: Export/import inspection.	Points 6, 7 and 8 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulation / General organisation / Procedures and standards. Chapter 5.2. on Certification procedures. Chapter 5.10. on Model health certificates for international trade in live aquatic animals and products of aquatic animal origin.
IV.5	Sub-point g) of Point 4 of Article 3.2.10. on Veterinary Services administration: Trade performance history. Chapter 5.3. on OIE procedures relevant to the Agreement on the Application of Sanitary and Phytosanitary Measures of the World Trade Organization.	Point 6 and 7 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulation / General organisation. Article 2.1.2. on The Agreement on the Application of Sanitary and Phytosanitary Measures and role responsibility of the OIE.
IV.6	Points 1 and 3 of Article 3.2.8. on Animal health controls: Animal health status / National animal disease reporting systems.	Point 6 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulation. Chapter 5.1. on General obligations related to certification.
IV.7		Point 6 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulation. Chapter 4.1. on Zoning and compartmentalisation.
IV.8		Point 6 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulation. Chapter 4.1. on Zoning and compartmentalisation. Chapter 4.2. on Application of compartmentalisation.

Appendix 2: Glossary of terms

Terms defined in the Aquatic Animal Health Code 2012 are reprinted here for ease of reference. For the purpose of the ***Aquatic Code***:

Aquaculture

means the farming of *aquatic animals* with some sort of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc.

Aquaculture establishment

means an establishment in which amphibians, fish, molluscs or crustaceans for breeding, stocking or sale are raised or kept.

Aquatic Animal Health Services

means the governmental and non-governmental organisations that implement animal health and welfare measures and other standards and recommendations in the Aquatic Code in the territory. The Aquatic Animal Health Services are under the overall control and direction of the Competent Authority. Private sector organisations, veterinarians, aquatic animal health professionals or veterinary paraprofessionals are normally accredited or approved by the Competent Authority to deliver the delegated functions.

Aquatic animal health status

means the status of a country, zone or compartment with respect to an aquatic animal disease, according to the criteria listed in the relevant chapter of the Aquatic Code dealing with the disease.

Aquatic animal products

means non-viable aquatic animals and products from aquatic animals.

Aquatic animals

means all life stages (including eggs and gametes) of fish, molluscs, crustaceans and amphibians originating from aquaculture establishments or removed from the wild, for farming purposes, for release into the environment, for human consumption or for ornamental purposes.

Aquatic Code

means the OIE Aquatic Animal Health Code.

Aquatic Manual

means the OIE Manual of Diagnostic Tests for Aquatic Animals.

Basic biosecurity conditions

means a set of conditions applying to a particular disease, and a particular zone or country, required to ensure adequate disease security, such as:

a. the *disease*, including suspicion of the *disease*, is compulsorily notifiable to the *Competent Authority*; and

b. an *early detection system* is in place within the *zone* or country; and

c. import requirements to prevent the introduction of *disease* into the country or *zone*, as outlined in the *Aquatic Code*, are in place.

Bias

means a tendency of an estimate to differ in a non-random fashion from the true value of a population parameter.

Biological products

means:

a. biological reagents for use in the diagnosis of certain diseases;

b. sera for use in the prevention and treatment of certain diseases;

c. inactivated or modified vaccines for use in preventive vaccination against certain diseases;

d. genetic material of infectious agents;

e. endocrine tissues from fish or used in fish.

Biosecurity plan

means a plan that identifies significant potential pathways for the introduction and spread of disease in a zone or compartment, and describes the measures which are being, or will be, applied to mitigate the risks to introduce and spread disease, taking into consideration the recommendations in the Aquatic Code. The plan should also describe how these measures are audited, with respect to both their implementation and their targeting, to ensure that the risks are regularly re-assessed and the measures adjusted accordingly.

Case

means an individual aquatic animal infected by a pathogenic agent, with or without clinical signs.

Case definition

is a set of criteria used to distinguish a case animal or an epidemiological unit from a non-case.

Certifying official

means a person authorised by the Competent Authority to sign health certificates for aquatic animals.

Commodity

Means aquatic animals, aquatic animal products, biological products and pathological material.

Compartment

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 disease 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 (ies).

Competent Authority

means the Veterinary Authority or other Governmental Authority of a Member having the responsibility and competence for ensuring or supervising the implementation of aquatic animal health and welfare measures, international health certification and other standards and recommendations in the Aquatic Code in the whole territory.

Container

means a transport appliance:

a. of a permanent type and sufficiently strong to enable repeated use;

b. specially constructed to facilitate transport of *aquatic animals* or *aquatic animal products* by one or several means of transport;

c. provided with fittings that make it easy to manipulate, particularly for trans-shipment from one kind of transport *vehicle* to another;

d. constructed in a watertight way, easy to load and unload and capable of being cleansed and disinfected;

e. ensuring safe and optimal transport of *aquatic animals*.

Contingency plan

means a documented work plan designed to ensure that all needed actions, requirements and resources are provided in order to eradicate or bring under control outbreaks of specified diseases of aquatic animals.

Diagnosis

means determination of the nature of a disease.

Disease

means clinical or non clinical infection with one or more aetiological agents.

Disinfectants

means chemical compounds capable of destroying pathogenic microorganisms or inhibiting their growth or survival ability.

Disinfection

means the application, after thorough cleansing, of procedures intended to destroy the infectious or parasitic agents of diseases of aquatic animals, including zoonoses; this applies to aquaculture establishments (i.e. hatcheries, fish farms, oyster farms, shrimp farms, nurseries, etc.), vehicles, and different equipment / objects that may have been directly or indirectly contaminated.

Early detection system

means an efficient system for ensuring the rapid recognition of signs that are suspicious of a listed disease, or an emerging disease situation, or unexplained mortality, in aquatic animals in an aquaculture establishment or in the wild, and the rapid communication of the event to the Competent Authority, with the aim of activating diagnostic investigation by the Aquatic Animal Health Services with minimal delay. Such a system will include the following characteristics:

a. broad awareness, e.g. among the personnel employed at *aquaculture establishments* or involved in processing, of the characteristic signs of the *listed diseases* and *emerging diseases*;

b. *veterinarians* or *aquatic animal* health professionals trained in recognising and reporting suspicions of *disease* occurrence;

c. ability of the *Aquatic Animal Health Services* to undertake rapid and effective *disease* investigation based on a national chain of command;

d. access by the *Aquatic Animal Health Services* to laboratories with the facilities for diagnosing and differentiating *listed diseases* and *emerging diseases*;

e. the legal obligation of private *veterinarians* or *aquatic animal* health professionals to report suspicions of *disease* occurrence to the *Competent Authority*.

Egg

means a viable fertilised ovum of an aquatic animal. 'Green eggs' means newly fertilised ova of fish. 'Eyed eggs' means eggs of fish where the eyes of the embryo are visible and that the eggs may be transported.

Emerging disease

means a newly recognised infection resulting from the evolution or change of an existing pathogenic agent, a known infection spreading to a new geographic area or population, or a previously unrecognised pathogenic agent or a disease diagnosed for the first time and which has a significant impact on aquatic animal or public health.

Epidemiological unit

means a group of animals that share approximately the same risk of exposure to a pathogenic agent with a defined location. This may be because they share a common aquatic environment (e.g. fish in a pond, caged fish in a lake), or because management practices make it likely that a pathogenic agent in one group of animals would quickly spread to other animals (e.g. all the ponds on a farm, all the ponds in a village system).

Eviscerated fish

means fish from which internal organs, excluding the brain and gills, have been removed.

Exporting country

means a country from which aquatic animals or aquatic animal products, biological products or pathological material are sent to a destination in another country.

Fallowing

means, for disease management purposes, an operation where an aquaculture establishment is emptied of aquatic animals susceptible to a disease of concern or known to be capable of transferring the pathogenic agent, and, where feasible, of the carrying water. For aquatic animals of unknown susceptibility and those agreed not to be capable of acting as carriers of a disease of concern, decisions on fallowing should be based on a risk assessment.

Feed

means any material (single or multiple), whether processed, semi-processed or raw, as well as live organisms, which is intended to be fed directly to aquatic animals.

Feed ingredient

means a component, part or constituent of any combination or mixture making up a feed, including feed additives, whether or not it has a nutritional value in the animal's diet. Ingredients may be of terrestrial or aquatic, plant or animal origin and may be organic or inorganic substances.

Free compartment

means a compartment that fulfils the requirements for self-declaration of freedom from disease with respect to the disease(s) under consideration, according to the relevant chapter(s) in the Aquatic Code.

Free country

means a country that fulfils the requirements for self-declaration of freedom from disease with respect to the disease(s) under consideration according to the relevant chapter(s) in the Aquatic Code.

Free zone

means a zone that fulfils the requirements for self-declaration of freedom from disease with respect to the disease(s) under consideration according to the relevant chapter(s) in the Aquatic Code.

Frontier post

means any international airport or any port, railway station or road post open to international trade.

Gametes

means the sperm or unfertilised eggs of aquatic animals that are held or transported separately prior to fertilisation.

Hazard

means a biological, chemical or physical agent in, or a condition of, an aquatic animal or aquatic animal product with the potential to cause an adverse effect on aquatic animal health or public health.

Hazard identification

means the process of identifying the pathogenic agent(s) that could potentially be introduced in the commodity considered for importation.

Importing country

means a country that is the final destination to which aquatic animals, aquatic animal products, biological products or pathological material are sent.

Incidence

means the number of new outbreaks of disease within a specified period of time in a defined aquatic animal population.

Infected zone

means a zone in which a disease has been diagnosed.

Infection

means the presence of a multiplying or otherwise developing or latent pathogenic agent in a host. This term is understood to include infestation where the pathogenic agent is a parasite in or on a host.

Infective period

means the longest period during which an affected aquatic animal can be a source of infection.

International aquatic animal health certificate

means a certificate, issued in conformity with the provisions of Chapter 5.10., describing the aquatic animal health and/or public health requirements that should be fulfilled prior to export of commodity.

International trade

means import, export or transit of aquatic animals, aquatic animal products, biological products and pathological material.

Listed diseases

Means diseases that are referred to in Chapter 1.3. of the Aquatic Code. (Synonym: diseases listed by the OIE.)

Meal

means a product derived from an aquatic animal that has been ground and heat processed to reduce the moisture content to less than 10%.

Notification

means the procedure by which:

a. the *Veterinary Authority* informs the *Headquarters*,
b. the *Headquarters* inform *Veterinary Authorities* of Members

of the occurrence of a disease, according to the provisions of Chapter 1.1. of the Aquatic Code.

Outbreak

means an occurrence of one or more cases in an epidemiological unit.

Pathogenic agent

means an organism that causes or contributes to the development of a disease referred to in the Aquatic Code.

Pathological material

means samples obtained from live or dead aquatic animals, containing or suspected of containing pathogenic agents, to be sent to a laboratory.

Prevalence

means the total number of infected aquatic animals expressed as a percentage of the total number of aquatic animals in a given aquatic animal population at one specific time.

Probability sampling

means a sampling strategy in which every unit has a known non-zero probability of inclusion in the sample.

Protection zone

means a zone established to protect the health status of aquatic animals in a free country or free zone, from those in a country or zone of a different aquatic animal health status, using measures based on the epidemiology of the disease under consideration to prevent spread of the pathogenic agent into a free country or free zone. These measures may include, but are not limited to, vaccination, movement control and an intensified degree of surveillance.

Quarantine

means maintaining a group of aquatic animals in isolation with no direct or indirect contact with other aquatic animals, in order to undergo observation for a specified length of time and, if appropriate, testing and treatment, including proper treatment of the effluent waters.

Risk

means the likelihood of the occurrence and the likely magnitude of the biological and economic consequences of an adverse event or effect to animal or human health.

Risk analysis

means the complete process composed of hazard identification, risk assessment, risk management and risk communication.

Risk assessment

means the evaluation of the likelihood and the biological and economic consequences of entry, establishment and spread of a hazard within the territory of an importing country.

Risk communication

is the interactive exchange of information and opinions throughout the risk analysis process concerning risk, risk-related factors and risk perceptions among risk assessors, risk managers, risk communicators, the general public and other interested parties.

Risk management

means the process of identifying, selecting and implementing measures that can be applied to reduce the level of risk.

Sanitary measure

means a measure, such as those described in various chapters of the Aquatic Code, destined to protect aquatic animal or human health or life within the territory of the OIE Member from risks arising from the entry, establishment and/or spread of a hazard.

Self-declaration of freedom from disease

means declaration by the Competent Authority of the country concerned that the country, zone or compartment is free from a listed disease based on implementation of the provisions of the Aquatic Code and the Aquatic Manual. [NOTE: The Member is

encouraged to inform the OIE of its claimed status and the OIE may publish the claim but publication does not imply OIE endorsement of the claim.]

Sensitivity

means the proportion of true positive tests given in a diagnostic test, i.e. the number of true positive results divided by the number of true positive and false negative results.

Specificity

means the probability that absence of infection will be correctly identified by a diagnostic test, i.e. the number of true negative results divided by the number of true negative and false positive results.

Stamping-out policy

means the carrying out under the authority of the *Competent Authority*, on confirmation of a disease, of preventive aquatic animal health measures, consisting of killing the aquatic animals that are affected, those suspected of being affected in the population and those in other populations that have been exposed to infection by direct or indirect contact of a kind likely to cause the transmission of the pathogenic agent. All these aquatic animals, vaccinated or unvaccinated, on an infected site should be killed and the carcasses destroyed by burning or burial, or by any other method that will eliminate the spread of infection through the carcasses or products of the aquatic animals destroyed.

This policy should be accompanied by cleansing and disinfection procedures as defined in the Aquatic Code. Fallowing should be for an appropriate period determined by risk assessment.

Study population

means the population from which surveillance data are derived. This may be the same as the target population or a subset of it.

Subpopulation

means a distinct part of a population identifiable according to specific common aquatic animal health characteristics.

Surveillance

means a systematic series of investigations of a given population of aquatic animals to detect the occurrence of disease for control purposes, and which may involve testing samples of a population.

Susceptible species

means a species of aquatic animal in which infection has been demonstrated by natural cases or by experimental exposures to the pathogenic agent that mimics the natural pathways for infection. Each disease chapter in the Aquatic Code and the Aquatic Manual contains a list of currently known susceptible species.

Target population

means, for the purposes of demonstrating freedom from infection, the population of interest, usually made up of all aquatic animals of species susceptible to a specified pathogenic agent in a defined country, zone or aquaculture establishment.

Targeted surveillance

means surveillance targeted at a specific disease or infection.

Territory

means land and water under jurisdiction of a country.

Transit country

means a country through which aquatic animals, aquatic animal products, biological products or pathological material destined for an importing country, are transported or in which a stopover is made at a frontier post.

Unit

means individually identifiable elements. This is a generic concept used to describe, for example, the members of a population, or the elements selected when sampling. In these contexts, examples of units include individual animals, ponds, nets, cages, farms, villages, districts, etc.

Vehicle

means any method of transport by land, air or water.

Veterinarian

means a person registered or licensed by the relevant veterinary statutory body of a country to practise veterinary medicine/science in that country.

Veterinary Authority

means the Governmental Authority of an OIE Member, comprising veterinarians, other professionals and para-professionals, having the responsibility and competence for ensuring or supervising the implementation of aquatic animal health and welfare measures, international aquatic animal health certification and other standards and recommendations in the Aquatic Code in the whole territory.

Veterinary statutory body

means an autonomous authority regulating veterinarians and veterinary para-professionals.

Water catchment

means an area or basin of land bounded by natural features such as hills or mountains, into which all run-off water flows.

Zone

means a portion of one or more countries comprising:

a. an entire *water catchment* from the source of a waterway to the estuary or lake, or
b. more than one *water catchment*, or
c. part of a *water catchment* from the source of a waterway to a barrier that prevents the introduction of a specific *disease* or *diseases*, or
d. part of a coastal area with a precise geographical delimitation, or

e. an estuary with a precise geographical delimitation,

that consists of a contiguous hydrological system with a distinct health status with respect to a specific disease or diseases. The zones must be clearly documented (e.g. by a map or other precise locators such as GPS co-ordinates) by the Competent Authority

Appendix 3: List of persons met or interviewed (in all cases by all team members)

MANILA - 3rd February 2013

OIEPVS Programme Discussion and Planning

Dr. H. Schneider

Dr. G. Grossel

Dr. G. Mylrea

Opening meeting

MANILA - 4th February 2013

Facility: Bureau of Fisheries and Aquatic Resources – BFAR - Competent Authority – Opening meeting

Atty. Benjamin Tabios, Jr.	Assistant Director for Administrative Services
Dr. Davinio P. Catbagan	Assistant Secretary for Livestock, Department of Agriculture, Philippines' Delegate to the OIE
Dr. Joselito R. Somga	OIE Focal Point for Aquatic Animals/Mission Contact Person
Dr. Simeona E. Regidor	Chief, FHMQAS
Sonia S. Somga	Senior Aquaculturist, FHMQAS
Maria Abegail A. Albaladejo	Supervising Aquaculturist, FMHQAS
Nestor D. Domenden	Regional Director, BFAR I
Esmeralda Paz D. Manalang	Regional Director, BFAR IVA
Asuncion J. Maputol	Assistant Regional Director, BFAR X
Fish Health Officers	Central/Regional Offices
Quarantine Officers	Central/Regional Offices
Atty. Annaliza A. Vitug	Chief, Fisheries Regulatory and Quarantine Division
Atty. Michael Andayog	Legal Division
Mildred M. Buazon	OIC, Administrative Division
Jose Razon, III	Head, Fisheries Management Information Center
Dr. Nelson Lopez	Chief, Inland Fisheries Aquaculture Division
Elymi-Ar-J S. Tunacao	Planning Division
Felisa L. Poniente	Chief, Finance Division
Romualdo R. Balagapo, II	Veterinarian, FHMQAS
Dr. Emelinda Lopez	Department of Agriculture, Bureau of Animal Industry
Roselyn Usero	Negros Prawn Producers Cooperative
Dr. Rowena Eguia	Southeast Asian Fisheries Development Center

Facility: Fisheries Information Management Center (FIMC)

Jose Razon, III	Fisheries Information Management Center

Facility BFAR Fish Health Laboratory (FHMQAS)

Simeona E. Regidor and Staff	FHMQAS

Field visits, meetings and interviews

REGION IVA - 5th February 2013

Facility: Field visit: TILAPIA Production cages – Taal Lake

Nestor Natanaunan	Cage operator
Eloisa S. Miraber	Local Government Unit
Rosario del Mundo	Provincial Fishery Officer
Representatives	Taal Lake Aquaculture Alliance

Facility Taal Lake Aquaculture Alliance

Representative	Taal Lake Aquaculture Alliance

Facility: DA-BFAR RFO IVA – Inland Fisheries Research Station (IFRS)/ Fish Health Laboratory – Tanauan, Batangas

Esmeralda Paz D. Manalang	Regional Director, Region IVA
Virginia M. Bartolome	Chief, FRMD
Ligaya P. Cabrera	Fish Health Officer
Nenita S. Kawit	Officer in Charge, IFRS

Facility: Fisheries Biological Station Complex (FBSC) – Taal, Batangas

Frederick Muyot	Officer in Charge

MANILA - 6th February 2013

Facility: Fisheries inspection and Quarantine Service, DA-BFAR IV-A
Manila International Airport

Ben Curativo	Chief, FIQS, BFAR IVA

Facility: Fisheries inspection and Quarantine Service, DA-BFAR IV-A
Port Area South Harbour 1018 Manila

Mario Trio	Chief, South Harbor

Facility: BFAR – Fish Health Laboratory – DA-BFAR IVA
South Harbor, Manila

Esmeralda Paz D. Manalang	Regional Director
Ligaya P. Cabrera	Head, Fish Health Laboratory
Welvin Parungao	Fish Health Officer
Marco Espiritu	Veterinarian

Facility: Manila Customs Office
Chief : Manila Customs Office and senior personnel

REGION III - 7th February 2013

Facility: **Fish Health Laboratory DA-BFAR III** – San Fernando City, Pampanga

Lilian Rueca	Chief, Fisheries Production Division
Carmencita Agustin	Head, Fish Health Laboratory
Gonzalo DV Coloma, Jr.	Fish Health Officer

Facility: **College of Veterinary Science and Medicine, Central Luzon State University** – Munoz, Nueva Ecija

Dr. Noraine P. Medina	Associate Professor
Dr. Lucia M. Rigos	Associate Professor

Facility: **College of Fisheries, Central Luzon State University** – Munoz, Nueva Ecija

Public Relation Officer

Facility: **National Molecular Biology and Biotechnology Laboratory, Central Luzon State University** – Munoz, Nueva Ecija

Dr. Yasser G. Cabansag	Research Assistant
Simon G. Alcantara	Research Assistant

Facility: **BFAR National Freshwater Fisheries Technology Center (NFFTC)** – Munoz, Nueva Ecija

Dr. Melchor M. Tayamen	Chief, NFFTC
Milagros M. Apaga	Aquaculture Technologist
Lilibeth B. Afan	Aquaculturist
Ma. Jodecel C. Danting	Sr. Aquaculturist

REGION I - 8th February 2013

Facility: **Agro-veterinary retail Outlet –** Bagong Flores, Lupao, N.E.

Shop owner

Facility: **Regional Fish Health Laboratory, DA-BFAR I** Dagupan City, Pangasinan

Nestor D. Domenden	Regional Director
Mea F. Baldonado	Fish Health Officer

Facility: **BFAR - National Integrated Fisheries Technology Development Center (NIFTDC)** – Dagupan City, Pangasinan

Evelyn A. Dangla	Aquaculturist II
Nerafe C. Meyalde	Aquaculturist II
Dr. Gany Gaspar	Veterinarian

Facility: **Field visit: Milkfish Mariculture Farm** – Sual, Pangasinan

Venrose de Maya

Facility: **BFAR I - Regional Mariculture Technology Development Center**
Alaminos, Pangasinan

Rey Arthur Santillan	Officer in Charge
Antonieta D. Evangelista	Techinical Expert
Martin T. Allayban	Technical Staff
Evelyn A. Dangela	Aquaculturist II

REGION I & MANILA - 9th February 2013

Facility: **Hundred Islands National Mariculture Park**
Accompanied by senior staff of the Regional Mariculture Technology Development Center

Facility: **Philippine Board of Veterinary Medicine, Manila**

Dr. Ma. Elizabeth D. Callanta	Board Member and Past President of the Philippine Veterinary Medical Association (PVMA)

BOHOL - 10th February 2013

Team discussions and report writing

REGION VII – CEBU - 11th February 2013

Facility: **Regional Fish Health Laboratory, DA-BFAR VII** - Cebu

Andres M. Bojos	Regional Director
Allan L. Poquita	Assistant Regional Director
Carolina C. Lopez	Head, Fish Health Laboratory
Babyruth Magno	Chief, RFLS

Facility: **Cebu International Airport**

Jeffrey Cortez	Chief, FIQS

Facility: **Marine Ornamental Fish Exporter** – Lapu Lapu City

Peter Lindsay Boserio	Owner

Facility: **Private Shrimp** (*Penaeus monodon*) **hatchery** – Lapu Lapu City

Junjun Tanchan	Owner/Manager

Facility: **PUFFI Fisheries Export Processing Plant** – Lapu Lapu City

Ken Choi	President
Erna Nisnisan	Operations Manager
Mary Grace C. Dehaga	Crab Production Manager

REGION VI – ILOILO - 12th February 2013

Facility: **Regional Fish Health Laboratory, DA-BFAR VI** – Iloilo

Drusila Esther E. Bayate	Regional Director
Precilla Pangantihon	OIC, Fisheries Laboratory
Robert Magdaug	Fish Health Officer
Edwin Javier	OIC, FRMD

Facility: **Southeast Asian Fisheries Development Center (SEAFDEC) – Aquaculture Department (AQD)**, Tigbauan

Dr. Felix G. Ayson	Chief, SEAFDEC-AQD
Dr. Edgar C. Amar	OIC, Fish Health Section
Dr. Rolando V. Pakingking	Scientist
Dr. Leobert dela Pena	Scientist

Facility: **College of Fisheries and Ocean Sciences, University of the Philippines** – Miagao

Dr. Erlinda C. Lacierda	Associate Professor
Dr. Jane s Geduspan	Director, National Institute of Molecular Biology and Biotechnology

Facility: **Private Shrimp** *(Penaeus vannamei)* **and Milkfish Hatchery**

Roel Rodriguez	Maturation Manager
Salvacion Rodriguez	Technical Operations Manager

BACOLOD - 13th February 2013

Facility: **Field visit: Intensive shrimp grow-out production** – Banago, Bacolod City

Melchor dela Cruz	Technician
Roel Montened	Technician

Facility: **Negros Prawn Producers Cooperative (NPPC)/Laboratory** - Bacolod City

Robero A. Gatuslao	Chairman, NPPC
Roselyn C. Usero	Laboratory Head
Alec S. Lustre	Director, NPPC
Raoul Q. Flores	Vice Chairman

Facility: **Phil Shrimp (Shrimp Producers Association)**

Roberto A. Gatuslao	President

REGION X – CAGAYAN DE ORO - 14th February 2013

Facility: **Mayor´s Office – Local Government Unit**; Balingasag

Mayor Alexis S. Quina and public relations officer

Facility: **Balingasag Mariculture Investors Association/Balingasag Mariculture Park**

Editha I. Modron	President
Marcelino. Limchu	Investor
Other investor members	

Facility **Regional Fish Health Laboratory, DA-BFAR X –** Cagayan de Oro

Asuncion J. Maputol	Assistant Regional Director
Evie D. Lumingkit	Head, Fish Health Laboratory
Thorndike Pingol	Fish Health Officer

MANILA - 15th February 2013

Facility: Private Organizations/Associations – Meeting at BFAR Central Office

Francis Chiquillo	President, Philippine Alliance of Seafoods Exporters Association (PASEA)
Dennis Brian Ty	Philippine Tropical Fish Exporters Association

MANILA - 16th and 17th February 2013

Report compilation and writing

Closing meeting

MANILA - 18th February 2013

Facility: Bureau of Fisheries and Aquatic Resources – BFAR – Competent Authority – Closing Meeting

Atty. Asis G. Perez	National Director, BFAR
Dr. Davinio P. Catbagan	Assistant Secretary for Livestock, Department of Agriculture, Philippines' Delegate to the OIE
Drusila Esther E. Bayate	Regional Director, BFAR VI / OIC, Assistant Director for Technical Services
Nestor D. Domenden	Regional Director, BFAR I
Remedios E. Ongtangco	Regional Director, BFAR III
Esmeralda Paz D. Manalang	Regional Director, BFAR IVA
Andres M. Bojos	Regional Director, BFAR VII
Dr. Simeona E. Regidor	Chief, FHMQAS
Dr. Joselito R. Somga	OIE Focal Point for Aquatic Animal/Mission Contact Person
Atty. Annaliza Vitug	Chief, Fisheries Regulatory and Quarantine Division
Mildred M. Buazon	OIC, Administrative Division
Dr. Sonia S. Somga	Sr. Aquaculturist, FHMQAS
Dr. Romualdo R. Balagapo, II	Veterinarian, FHMQAS
Dr. Emelinda Lopez	Bureau of Animal Industry, Department of Agriculture
Fish Health Officers	Central/Regional Offices
Quarantine Officers	Central/Regional Offices

Appendix 4: Timetable of the mission and sites/ facilities visited

3rd February 2013

Place: **MANILA**
Team arrival

Facility: **Cocoon Boutique. Hotel** - Meeting Director of BFAR
TOPIC: Discussion of needs and programme

4th February 2013

Place: **MANILA**

Facility: **Bureau of Fisheries and Aquatic Resources – BFAR - Competent Authority**
TOPIC: Opening meeting of OIEPVS AQUATIC ANIMAL HEALTH evaluation
Discussion and finalisation of programme
General information and discussion with Director, Deputy Directors and Senior Management personnel

OIE of the Focal Point for Aquatic Animals

Briefing/information sessions by

Inland Fisheries and Aquaculture Division
Planning Division
Administrative Division
Finance Division
Fisheries Regulatory and Quarantine Division
Legal Division

Facility: **Fisheries Information Management Center (FIMC)**
TOPIC: Fisheries Management and health certification

Facility **BFAR Fish Health Laboratory (FHMQAS)**
TOPIC: Laboratory Serivices

Overnight Manila

5th February 2013

Place: **NATANAUAN BATANGAS**

Facility: **Field visit: TILAPIA Production cages – Taal Lake**
TOPIC: General management and AAH aspects

Facility **Taal Lake Aquaculture Alliance**
TOPIC: Tilapia culture and disease surveillance

Place: **TANAUAN BATANGAS**

Facility: **BFAR Fish Health Laboratory (FHMQAS) – Prov. Fisheries Office**
TOPIC: Laboratory investigations and services rendered

Place: **AMBULONG BATANGAS**

Facility **DA-BFAR RFO IVA - Inland Fisheries Research Station**
TOPIC: Sureveillance and services rendered

Place: **BUTONG, BATANGAS**

Facility: **National Fisheries Biological Center**
TOPIC: General management and AAH aspects

Overnight Taal

6th February 2013

Place: **MANILA**

Facility: **Fisheries inspection and Quarantine Service, DA-BFAR RFO IV-A**Manila International Airport
TOPIC: Import and quarantine control, export control

Facility: **Fisheries inspection and Quarantine Service, DA-BFAR RFO IV-A**Port Area South Harbour 1018 Manila
TOPIC: Import and quarantine control, export control

Facility: **BFAR – Fish Health Laboratory – DA-BFAR RFO IVA**
TOPIC: Laboratory services performed and general information

Facility: **Manila Customs Office**
TOPIC: Cooperation with FHMQAS - Import and export procedures

Overnight Manila

7th February 2013

Place: **SAN FERNANDO CITY, PAMPANGA**

Facility: **Fish Health Laboratory DA-BFAR RFO III**
TOPIC: Aquatic animal health and laboratory services

Place: **MUNÕZ NUEVA ECIJA**

Facility: **Central Luzon State University, College of Veterinary Science and Medicine**
TOPIC: Veterinary pre- and post-graduate training

Facility: **College of Fisheries – Central Luzon State University**
TOPIC: Training of fisheries technologists

Facility: **National Molecular Biology and Biotechnology Laboratory**
TOPIC: Fisheries research and veterinary training

Facility: **National Freshwater Fisheries Technology Center (NFFTC)**
TOPIC: Management and AAH aspects

Overnight CLSU Campus, Munoz, Nueva Ecija

8th February 2013

Place: **BAGONG FLORES**

Facility: **Agro-veterinary retail outlet**
TOPIC: Sale over the counter of veterinary medicinal products

Place: **DAGUPAN CITY**

Facility: **Fish Health Laboratory DA-BFAR RFO I**
TOPIC: Aquatic animal health and laboratory services

Place: **BONUAN - BINLOC**

Facility: **National Integrated Fisheries Technology Development Center (NIFTDC)**
TOPIC Management of the country's fishery and aquatic resources

Place: **SUAL**

Facility: **Field visit: Milkfish aquaculture farm**
TOPIC: General management and AAH aspects

Place: **ALAMINOS, LUCAP**

Facility: **Regional MaricultureTechnology Development Center**
TOPIC Conserve, protect and sustain the management of the country's fishery and aquatic resources

Overnight Alaminos, Pangasinan

9th February 2013

Place: **ALAMINOS, LUCAP**

Facility: **Hundred Islands National Mariculture Park**
TOPIC Fisheries research

Return to Manila by car

Place: **MANILA**

Facility: **Philippine Board of Veterinary Medicine**
TOPIC VSB aspects and licensing procedures
Philippine Veterinary Medical Association aspects

Overnight Manila

10th February 2013

Flight Philippine Airlines from **Manila to Tagbilaran, Bohol**

Place: **TAGBILARAN**
Team discussions and report writing

Overnight Tagbilaran

11th February 2013

By ferry from **Tagbilaran to Cebu**

Place: **CEBU**

Facility: **BFAR Regional Fisheries Office Region VII - Fish Health Laboratory**
TOPIC: General administrative and Laboratory investigations

Facility: **FHMQAS Region VII - Cebu International Airport**
TOPIC: Import and export procedures

Place: **LAPU LAPU CITY, CEBU**

Facility: **Marine Ornamental Fish Exporter**
TOPIC: Import and export procedures

Facility: **Private Shrimp (*Penaeusmonodon*) hatchery**
TOPIC: Aquatic animal disease control measures

Facility: **PUFFI Fisheries Export Processing Plant**
TOPIC: Fisheries production and product traceability

Overnight Cebu

12th February 2013

Flight Philippine Airlines from **Cebu to Iloilo**

Place: **IIOILO CITY**

Facility: **BFAR Regional Fisheries Office Region VI - Fish Health Laboratory**
TOPIC: General administrative and Laboratory investigations performed

Place: **TIGBAUAN**

Facility: **Southeast Asian Fisheries Development Center (SEAFDEC) – Aquaculture Department**
TOPIC: General fisheries management and AAH procedures

Place: **MIAGAO**

Facility: **University of the Philippines – College of Fisheries**
TOPIC: Currriculum for fisheries technologist – laboratory services and research

Place: **SAN JOAQUIN**

Facility: **Private Shrimp (*Penaeusvannamei*) and Milkfish hatchery**
TOPIC: Aquatic animal disease control measures

Overnight Iloilo

13th February 2013

By ferry from **Iloilo City to Bacolod**

Place: **BACOLOD CITY**

Facility: **Field visit: Intensive shrimp production**
TOPIC: General management and AAH aspects

Facility: **Negros Prawn Producers Marketing Cooperative, Inc (NPPMCI)**
TOPIC: Private laboratory services and Interest parties cooperation and marketing

Facility: **Phil Shrimp (Shrimp Producers Association)**
TOPIC: Interest parties cooperation and marketing

Flight Philippine Airlines from **Bacolod to Manila**

Overnight Manila

14th February 2013

Flight Philippine Airlines from **Manila to Cagayan de Oro**

Place: **BALINGASAG**

Facility: **Mayor´s Office – Local Government Unit**
TOPIC: Briefing by Mayor and local government fisheries issues

Facility: **Balingasag Milkfish Investors Association**
TOPIC: Interested parties involvement and milkfish mariculture and AAH procedures

Place: **CAGAYAN DE ORO**

Facility: **DA-BFAR Regional Office Region X – Fish Health Laboratory**
TOPIC: General administrative and financial issues – laboratory services

Overnight Cagayan de Oro

15th February 2013

Flight Philippine Airlines from **Cagayan de Oro to Manila**

Place: **MANILA**

Facility: **Interested Parties and Organisations – Meeting at BFAR Offices**
TOPIC: General AAH information and administrative and legal issues

1. Philippine Tropical Fish Exporters Association
2. Philippine Alliance of Seafoods Exporters Association (PASEA)

Overnight Manila

16th and 17th February 2013

Place: **MANILA**

TOPIC: Report compilation and writing

Overnight Manila

18th February 2013

Place: **MANILA**

Facility: **Bureau of Fisheries and Aquatic Resources – BFAR - Competent Authority**
TOPIC: Closing meeting

OIEPVS-AAH Team departure

Appendix 5: Air travel itinerary

ASSESSOR	DATE	From	To	Flight No.	Departure	Arrival
GROSSEL Geoff	02.02.13	Canberra	Sydney	QF 1468	1030	1120
		Sydney	Manila	QF 19	1250	1800
3MQYVT	17.02.13	Manila	Hong Kong	CX 902	1955	2200
		Hong Kong	Sydney	QF 88	2330	1155**+**
	18.02.13	Sydney	Canberra	QF 1475	1335	1425
MYLREA Gillian	02.02.13	Paris	Amsterdam	Kl 2022	1740	1855
		Amsterdam	Manila	KL 807	2045	1925+
	18.02.13	Manila	Amsterdam	KL 808	2050	0655**+**
	19.02.13	Amsterdam	Paris	KL 1229	0800	0925
SCHNEIDER Herbert	28.01.13	Windhoek Johannesburg	Johannesburg Bangkok	SA 73 TG 992	0715 1340	0905 0555**+**
8TUDC8 *8A9L7O*	03.02.13	Bangkok	Manila	TG 620	0745	1155
	18.02.13	Manila	Bangkok	TG 621	1310	1525
	20.02.13	Bangkok	Johannesburg	TG991	0115	0730
		Johannesburg	Windhoek	SA74	0930	1130

10th February	★	MANILA to Tagbilaran	★
12th February	★	Cebu City to Iloilo City	★
13th February	★	Bacolod to Manila	★
14th February	★	MANILA toCagayan de Oro	★
15th February	★	Cagayan de Oro to MANILA	★

Appendix 6: List of documents used in the Aquatic PVS evaluation

E = Electronic version H = Hard copy version PP = PowerPoint Presentation C=Disk

Ref	Title	Author / Date / ISBN / Web	Related critical competences
	PRE-MISSION DOCUMENTS		
E.1	2012 NOV 12 Baseline infomation request to PHL. docx	OIEPVS Team and BFAR	**All parts**
E.1 a	General data	2012 NOV 12 Baseline infomation request to PHL. docx	**All parts**
E.1 b	Human & Financial Resources	2012 NOV 12 Baseline infomation request to PHL. docx	**All parts**
E.1 c	Technical authority & capability	2012 NOV 12 Baseline infomation request to PHL. docx	**All parts**
E.1 d	Interaction with interested parties	2012 NOV 12 Baseline infomation request to PHL. docx	**All parts**
E.1 e	Access to markets	2012 NOV 12 Baseline infomation request to PHL. docx	**All parts**
E.2	2009 Fisheries Situation Report Jan-Dec 2009	BFAR 2009 ISSN-2012-0400	**PART 2**
E.3	2004 FAO Philippines National Aquaculture Sector Overview	http://www.fao.org/fishery/countrysector/naso_philippines/en	**PART 2**
E.4	2008 PHL OIEPVS Report	www.oie.int	**All parts**
E.5	2007 FAO Techn. Paper 497 Study & Analysis of feeds and fertilizers for aquac. developm.	www.fao.int	**PART II**
E.6	1999-2000 FAO Rural Aquaculture in the Philippines	www.fao.org -RAP Publication 1999/20	**PART II**
E.7	2011 EU Report 2011-8896_FINAL	http://ec.europa.eu/food/fvo/index_en.htm DG(SANCO) 2011-8896	**PART III**
E.7a	2011 Response to EU Report 2011-8896_FINAL	*http://ec.europa.eu/food/fvo/index_en.htmDG(SANCO) 2011-8896*	**PART III**
E.8	2006 EU Report 8312 of year 2006	*http://ec.europa.eu/food/fvo/index_en.htm*	**PART III**
E.9	2004 EU Report 7355 of year 2004	*http://ec.europa.eu/food/fvo/index_en.htm*	**PART III**
E.10	2001 EU Report 3320 of year 2001	*http://ec.europa.eu/food/fvo/index_en.htm*	**PART III**
E.11	2005 FAO - RAP Public. 2005-16 Asian Fisheries Today	*www.fao.org*	**PART II**
E.12	2009 FAO Fishery & Aquaculture Stats	*www.fao.org*	**PART II**
E.13	2006 Mariculture in the Philippines	*westlyrosario@yahoo.com*	**PART II & III**
E.14	2010 PHL Fisheries Profile	*www.bfar.da.gov.ph*	**PART II**
E.15	Phl fishery legislation	*http://www.bfar.da.gov.ph/pages/Le*	**PART II, III.4.1**

		gislation/fisheriescodera8550.html	
E.16	2011 JUN 06 Register Aquaculture Farms	*www.bfar.da.gov.ph*	**PART III.3**
E.17	2011 AUG 03 Masterlist of Live Food Fish Exporters	*www.bfar.da.gov.ph*	**PART III.3**
E.18	2010 MAR 02 Trop Marine Ornamental Fish &Inverteb Exporters	*www.bfar.da.gov.ph*	**PART III.3**
E.19	Philippine country statement on quality certification	*www.bfar.da.gov.ph*	**PART III.2**
E.20	2011 OIE Panama MOHAN re Asia Pacific	*www.oie.int 2011 Panama Conference by Network of Aquaculture Centres in Asia-PacificBangkok, Thailand*	**PART III.2**
E.21	International Trade in Aquatic Animals	*Diseases in Asian Aquaculture VI. Fish Health Section, Asian Fisheries Society, Manila, Philippines. Corresponding author: Eva-Maria Bernoth,*	**PART III.2.4, 2.5, 2.6 & 2.7**
E.22	2001 FAO Tech Paper 402-2 Asia Diag Guide to AquAnim Dis	*www.fao.org*	**PART III.2.4, 2.5, 2.6 & 2.7**
E.23	2002 Invasive aquatic animals in PHL	*Rafael D. Guerrero in Special Report – Asean Biodiversity*	**PART III.2 & 3**
E.24	2005 Current Status of Transboundary Fish Diseases in the Philippines	*Simeona E. Regidor, Juan D. Albaladejo and Joselito R. Somga Fish Health Section Bureau of Fisheries and Aquatic Resources*	**PART III.2.4, 2.5, 2.6 & 2.7**
E.25	2009 AM agents in aquaculture	*C.J. Rodgers and M.D. Furones IRTA-Centre d'Aqüicultura, Ctra. PobleNou, s/n Km 5,5, 43540 Sant Carles de la Ràpita, Tarragona, (Spain)*	**PART III.2.9 & 10**
E.26	2012 OIE Aquatic Code	*www.oie.inthttp://www.oie.int/en/international-standard-setting/aquatic-code/access-online/*	**Whole report**
E.27	MAPS provided by BFAR		**PART II; PART III 1.1; 2.1**
E.28	OIE Tool for the Evaluation of Performance of Aquatic Animal Health Services (OIEPVS Tool: Aquatic) 2013 1st edit.	*www.oie.int*	**Whole report**
	MISSION DOCUMENTS		
EM.1	Fishery Code Implementing Rules and Regulations	*BFAR*	**PART III**
EM.2	RA 8435 of 1997 = Agricultureand Fisheries Modernization Act of1997	*Govt of the Philippines Act*	**Whole Report**
EM.3	2011 Annual Report	*BFAR*	**PART II & III**
EM.4	Inland Fisheries & Aquaculture Division	*BFAR Opening Presentation*	**PART III**

EM.5	Veterinary Education in the Philippines	Journal or Southeast Asian Education 2002, Vo l. 3, No.2, PI'. 245-258	**II.2 & III.5**
PP.1	PVS Opening Meeting Presentation	Dr H. Schneider & Team	
PP.2	DA-BFAR presentation 2008	*BFAR Opening Presentation*	**PART 2 and 3**
PP.3	BFAR Admin Division	BFAR Opening Presentation	**PART 3**
PP.4	Fisheries Regulatory and Quarantine Division	BFAR Opening Presentation	**PART 3**
PP.5	Administrative Serv. Presentation 2013	BFAR Opening Presentation	**PART 3**
PP.6	Fishing Policy & Economics Div.	BFAR Opening Presentation	**PART 3**
PP.7	Legal division LD Briefing Session	BFAR Opening Presentation	**PART 3**
PP.8	Nat, Freshw. Fish. Techn. Center	NFFTC – CLSU Munoz	**PART 3**
PP.9	BFAR-RFO Region 1	RFO 1 – Dagupan City	**PART 3**
PP.10	Fish. Inspect & Quarantine Service	RFO 7 - Cebu	**PART 3**
PP.11	Fish Health Managem.& Lab Services	RFO 7 - Cebu	**PART 3**
PP.12	Fish Health Managem.& Lab Services Accomplishment Report 2012	RFO 7 - Cebu	**PART 3**
PP.13	Regional Fisheries Laboratory	RFO 7 - Cebu	**PART 3**
H.1	BFAR Contract of Service/Job descrip	*BFAR*	**I.1**
H.2	Shrimp Diseases Recognition Cards	*BFAR*	**II.7**
H.3	Code of Practice: Shrimp farming	*BFAR*	**II.7**
H.4 A	Report of Inspection registered. aquaculture farms	*BFAR*	**II.7**
H.4 B	Disease Surv. & on-farm monitoring	*BFAR form*	**II.5; II.7; II.10**
H.5	Official List Notifiable Diseases	*BFAR (Terrestrial & Aquatic)*	**II.4;II.7**
H.6	Veterinary pre-graduate curriculum	*CLSU-College of Vet.Sc& Medicine*	**I.2 A**
H.7	Biosecurity on shrimp farms	*SEAFDEC*	**II.4**
H.8	Prevention of parasites in groupers	*SEAFDEC*	**II.7**
H.9	Best farm practices – shrimp culture	*BFAR/ Negros Prawn Producers*	**II.7**

Appendix 7: Organisation of the Aquatic PVS evaluation of the AAHS of the Philippines

AssessorsTeam:

- Dr Herbert Schneider: Team leader
- Dr Geoff Grossel : Technical expert
- Dr Gillian Mylrea : Technical expert:

References and Guidelines:

- Terrestrial Animal Health Code (especially Chapters 3.1. and 3.2.)
- Aquatic Animal Health Code (especially Chapter 3.1.)
- OIE PVS Tool for the Evaluation of Performance of AAHS
  - → Human, financial and physical resources,
  - → Technical capability and authority,
  - → Interaction with interested parties,
  - → Access to markets.

Dates: 3rd– 18thFebruary 2013

Language of the audit and reports: English

Subject of the evaluation: AAHS as defined in the Aquatic Animal Health Code

- Not included in the country's VS
- Not inclusive of other institutions / ministries responsible for activities of VS

Activities to be analysed:

All activities related to animal and veterinary public health:

- Field activities:
  - → Aquatic Animal health (epidemiological surveillance, early detection, disease control, etc)
  - → Quarantine (sea ports)
  - → veterinary public health (food safety, veterinary medicines andbiologicals, residues, etc)
  - → Control and inspection
- Data and communication
- Diagnostic laboratories
- Initial and continuous training
- Organisation, physical resources and finance

Persons* met and consulted*: see Appendix 3

Sites visited: see Appendix 4

Procedures:

- Consultation of data and documents
- Comprehensive field trips
- Interviews and meetings with AAHS staff and stakeholders,
- Analysis of practical processes

Provision of assistance by the evaluated country

- Completion of missing data as possible
- Translation of relevant document if required
- Administrative authorisation to visit designated sites
- Logistical support if possible

Reports:

- a fact sheet or MSPowerpoint®summary is presented at the opening session
- a report will be sent to the OIE for peer-review no later than one month after the mission
- the current levels of advancement with strengths, weaknesses and references for each critical competence will be described,
- general recommendations may be made in agreement with the VS/AAHS.

Confidentiality and publishing of results

The results of the evaluation are confidential between the Philippines and the OIE and may only be published with the written agreement of the Philippines.