

PHILIPPINE NATIONAL STANDARD

PNS/BAFS 135: 2014
ICS 65.150

Code of Good Aquaculture Practices (GAqP)



BUREAU OF PRODUCT STANDARDS

Member to the International Organization for Standardization (ISO)
Standards and Conformance Portal: www.bps.dti.gov.ph

Foreword

The development of this Philippine National Standard (PNS) on the Code of Good Aquaculture Practices (GAqP) is part of the Philippine's commitment to the Association of Southeast Asian Nations' (ASEAN) Roadmap for ASEAN Community 2009-2015, which seeks to enhance intra-and extra-ASEAN trade and long-term competitiveness of ASEAN food, agriculture and forestry products/commodities.

This Code contains practices adopted from the "*Good Aquaculture Practice Farmers Guidance Workbook*" of the Bureau of Fisheries and Aquatic Resources (BFAR) developed under the European Union (EU) Trade Related Technical Assistance (TRTA) Project. The Food and Agriculture Organization (FAO) Technical Guidelines on Aquaculture Certification, ASEAN GAqP for Shrimp Farming, and the ASEAN GAqP for Food Fish (Volume 1) were also used as major references for the finalization of this standard.

The draft PNS on GAqP was presented for comments and recommendations through a series of consultative meetings/workshops with the private sector (exporters, feed millers, aqua-farmers, processors) in Luzon, Visayas and Mindanao. It was also presented to the Committee on Fisheries and Aquaculture (CFA) of the Philippine Council for Agriculture and Fisheries (PCAF), formerly the National Agriculture and Fishery Council (NAFC), on October 2013 for final comments prior to its adoption as the PNS.

Code of Good Aquaculture Practices (GAqP)

1 Scope

This Code of Good Aquaculture Practices (GAqP) covers practices that aim to prevent or minimize the risk associated with aquaculture production (mariculture, coastal aquaculture/ brackishwater culture, and freshwater culture). This Code covers the following aspects of aquaculture production namely: a) food safety, b) animal health and welfare, c) environmental integrity, and d) socio-economic.

This Code applies to aquaculture farms/projects, such as, but not limited to, hatcheries, nurseries, fish cages, fish pens, fishponds, seaweed and mollusks farms, which may be owned by individuals, corporations, and/or producer associations.

This Code consists of minimum compliance requirements.

2 References

The titles of the standards and publications referred to in this Standard are listed in the inside back cover.

3 Siting and design**3.1 Location**

Aquaculture farms should be in an environmentally suitable area where risks to food safety from chemical, biological and physical hazards from air, soil and water are minimized.

Compliance requirements:

3.1.1 Available environmental impact assessment (EIA) or recent environmental report;

3.1.2 Proof of legal ownership of the farm area (license to operate or business permit from the local government unit);

3.1.3 Available risk assessment report;

3.1.4 Vicinity map (indicating different enterprises around the farm); and

3.1.5 Farm map (showing the sources and discharges of water).

3.2 Lay-out and design

3.2.1 Aquaculture farms should be used for aquaculture purposes only. Livestock production is not allowed unless done in distinct areas within the farm. Wild and domestic animals should be excluded from pond and harvesting areas.

Compliance requirements:

- 3.2.1.1** Evidence of segregating aquaculture activities with livestock activities;
 - 3.2.1.2** Installation of proper segregating device (e.g. fences) from livestock that are present in the farm; and
 - 3.2.1.3** Farm layout showing the different structures of the farm (e.g. location of ponds in relation to livestock houses).
- 3.2.2** Farm design and layout should prevent cross contamination.

Compliance requirements:

- 3.2.2.1** Evidence that current dike can withstand high level of water;
 - 3.2.2.2** Barriers or control measures in place at all possible entry points in the farm;
 - 3.2.2.3** All entry points should have warning signs;
 - 3.2.2.4** Footbath or tire-bath should be in place;
 - 3.2.2.5** Proof or evidence of using bio-security measures;
 - 3.2.2.6** No waste storage located at least 50meters from pond area;
 - 3.2.2.7** Proper facilities for storing feeds and other materials used in the pond must be away from toxic chemicals;
 - 3.2.2.8** Provide evidence of compliance with local regulations;
 - 3.2.2.9** Cage materials are proven durable and corrosion resistant;
 - 3.2.2.10** Chemical (carcinogenic/toxic) containers should not be used as floaters and/or containers of fish; and
 - 3.2.2.11** Sanitary facility should not be present near the water system and at least 50 meters from farm operation.
- 3.2.3** Septic tanks and toilet facilities should be well constructed and placed so drainage does not cause a risk of contamination of farm facilities.

Compliance requirements:

- 3.2.3.1** Toilets should have proper septic tank with appropriate cover; and
- 3.2.3.2** Septic tanks should be located at least 50 meters away from pond areas.

3.2.4 Equipment, such as cages and nets, should be designed and constructed to ensure minimal physical damage to fish during growing and harvesting and to allow for adequate cleaning and disinfection.

Compliance requirements:

3.2.4.1 Records of monitoring of mortalities during handling procedures;

3.2.4.2 No evidence of materials that can cause stress (greasy nets, corrosive materials); and

3.2.4.3 Appropriate feeding areas that would allow large volumes of fish at a time.

3.2.5 Equipment, such as containers and vehicles for feed, seed and harvested fish/crustaceans, should be designed and constructed to allow for adequate cleaning and disinfection.

Compliance requirements:

3.2.5.1 List of equipment available in the farm with corresponding usage;

3.2.5.2 Proper storage of different equipment in the farm; and

3.2.5.3 Materials for containing fish should be in compliance with local regulations.

4 Facilities and sanitation

4.1 Facilities

4.1.1 Facilities for disposal of solid and liquid wastes should be available in a suitable area (allow for hygienic disposal).

Compliance requirements:

4.1.1.1 Written procedures on solid and liquid waste disposal;

4.1.1.2 Provision of appropriate waste containers that are sealable;

4.1.1.3 Evidence of management activities to minimize contamination in the production system;

4.1.1.4 Record of collection schedule for wastes;

4.1.1.5 Evidence of means of disposal that is compliant with local regulation; and

4.1.1.6 Allocation of treatment area for pond/farm effluents prior to discharge.

4.1.2 Fuel, chemical substances (sanitizer fertilizer, reagents), feed and veterinary drugs should be stored separately and in safe condition.

Compliance requirements:

4.1.2.1 Space allocation in the storage area to accommodate/segregate chemicals, paints, fuel and other lubricants;

4.1.2.2 Storage should be locked and only authorized staff have access; and

4.1.2.3 Storage for fuel should be able to contain spillage in the case of the risk happening.

4.2 Sanitation

4.2.1 Farm/cage and surroundings should be maintained in a clean and hygienic condition.

Compliance requirements:

4.2.1.1 Written procedures for cleaning and maintenance of the facilities;

4.2.1.2 Records of monitoring and cleaning events; and

4.2.1.3 Evidence of proper area allocation for cleaning/sanitizing equipment in the farm.

4.2.2 Containers, equipment and farm facilities should be maintained in sound condition so they are easy to clean and sanitize.

Compliance requirements:

4.2.2.1 Written procedures for regular maintenance of the equipment in the farm;

4.2.2.2 Records of cleaning schedules/activities for equipment;

4.2.2.3 Evidence of proper labeling for each equipment available in the farm (used and unused); and

4.2.2.4 Provision of storage area for equipment with proper ventilation.

4.2.3 Adequate procedures for cleaning and disinfection of containers, equipment and farm facilities should be in place and implemented.

Compliance requirements:

4.2.3.1 Written procedures on cleaning and disinfection;

4.2.3.2 Proper storage for clean equipment; and

4.2.3.3 Evidence of space allocation for different equipment in the farm.

4.3 Waste removal

4.3.1 Waste should be removed at least once a day.

Compliance requirement:

Protocol on waste removal and disposal should be available.

4.3.2 Waste containers and the waste storage premises should be cleaned and sanitized after each use.

Compliance requirements:

4.3.2.1 Monitoring procedure and cleaning schedules in place;

4.3.2.2 Laborers must demonstrate awareness on the procedure and schedules for cleaning and sanitation;

4.3.2.3 Evidence of waste management procedures being implemented; and

4.3.2.4 Proper signs should be visible on all waste containers.

4.3.3 Waste should be stored such that it is not a source of contamination.

Compliance requirements:

4.3.3.1 Written procedure on storing liquid wastes;

4.3.3.2 Laborers must show awareness and be able to demonstrate the procedures on waste storage and disposal;

4.3.3.3 Records of regular monitoring of waste containers; and

4.3.3.4 Evidence of space allocation for waste confinement.

5 Water use

Farm input water should be far from all pollution sources and sufficient and suitable throughout the year.

Compliance requirements:

5.1 Records of water quality; and

5.2 Result of current (3 – 6 months) laboratory analysis for water intake.

6 Farm management

6.1 Pond preparation

6.1.1 Pond preparation practices should minimize risk for cross-contamination.

Compliance requirements:

6.1.1.1 Written protocol on pond preparation indicating the methods used in clearing the production unit;

6.1.1.2 Pond dikes/pens/nets are checked prior to stocking;

6.1.1.3 Space allocation for containing sludge from the production unit;

6.1.1.4 Sludge container should be free from seepage;

6.1.1.5 Evidence of laboratory analysis for soil condition (evidence that chemical application is based on the result of soil analysis); and

6.1.1.6 List of chemicals used in pond preparation.

6.1.2 Prohibited chemicals or biological substances should not be used in pond preparation.

Compliance requirements:

6.1.2.1 Available list of chemicals that are banned in the country; and

6.1.2.2 Available list of chemicals or biological substances purchased and used in the farm.

6.1.3 Fertilizers, probiotics and chemicals should be used according to instructions for proper use.

Compliance requirements:

6.1.3.1 Protocol on application of fertilizer;

6.1.3.2 Available soil analysis for NPK; and

6.1.3.3 Records on application of chemicals and probiotics.

6.1.4 Adequate records should be kept on pond management activities (e.g. preparations and water quality controls).

Compliance requirements:

6.1.4.1 All records should be available for inspection; and

6.1.4.2 All relevant documents should be available and responsible personnel should have access to the records.

6.1.5 Adequate records should be kept on the origin and the type of seed used.

Compliance requirements:

6.1.5.1 Movement documents and purchase orders should be available during inspection;

6.1.5.2 Sources of inputs should be traceable one degree level (one-step-back traceability); and

6.1.5.3 Information about the seed: strain, origin, amount, and other description.

6.2 Water management

6.2.1 Water should be properly screened/ settled/ aerated and quality should be maintained as suitable for cultured stock.

Compliance requirements:

6.2.1.1 Evidence of proper inspection/testing of water prior to entry into the system;

6.2.1.2 Records of water quality monitoring with dissolved oxygen (DO) not lowering to 3 ppm;

6.2.1.3 Screens with appropriate mesh size are installed in farm inlet and outlet;

6.2.1.4 Farm allocation of settling pond for water coming in from natural system;

6.2.1.5 Concurrent use of settling pond as reservoir is not allowed;

6.2.1.6 Farm should have a standby aeration system in case the oxygen level in the system becomes low;

6.2.1.7 Ponds are required to be drained for more efficient organic waste removal;

6.2.1.8 Available layout of cages (map) indicating the distances between modules;

6.2.1.9 Records of clearing cage modules from clinging organisms (debris, plants, clams, etc.); and

6.2.1.10 Regular monitoring and repair of production units (nets).

6.2.2 Water quality should be verified to be adequate through testing to ensure safety.

Compliance requirements:

6.2.2.1 Farm personnel should be able to demonstrate awareness and skills on monitoring water quality;

6.2.2.2 Protocol on water quality monitoring should include the location, time and the different parameters to be monitored; and

6.2.2.3 Regular calibration of water quality equipment is required.

6.3 Personnel hygiene

6.3.1 All workers should undergo an annual medical examination.

Compliance requirements:

6.3.1.1 Evidence of annual check-up of all staff; and

6.3.1.2 Health screening of all staff should be part of the management system.

6.3.2 Personnel who could contaminate products should be excluded from working and handling of fishery products.

Compliance requirements:

6.3.2.1 Laborers/workers with evidence of contagious illness are not allowed to work in the farm;

6.3.2.2 Evidence of regular screening/checking of workers for communicable illnesses;

6.3.2.3 No personal accessories allowed when working/handling products at post harvest; and

6.3.2.4 Standard operating procedures on hygiene are applied when working with products at the post-harvest stage.

6.3.3 Workers should wear suitable and clean working clothing.

Compliance requirement:

Protocol on clean working clothes during post-harvest handling to prevent contamination of fishery products should be in place and posted at employees quarters and entrance(s) to post-harvest processing areas.

6.3.4 Workers should wash their hands each time before commencing work.

Compliance requirement:

There should be a designated washing area with soap and clean water for use of workers before and after post-handling operation.

6.3.5 Wounds should be covered with waterproof bandages and clean, waterproof gloves or boots.

Compliance requirements:

6.3.5.1 Workers with open wounds in hands or any part of the body which might come in contact with the fishery product during post-harvest activity are not allowed unless sufficiently covered with waterproof bandages and clean, waterproof gloves or boots;

6.3.5.2 Workers with open wounds in any part of the body (e.g. foot) are not allowed to work in the farm unless sufficiently covered with waterproof bandages and clean, waterproof gloves or boots and/or wearing waders, if feasible.

6.3.6 Staff should not smoke, spit, eat or drink in the working and storage premises.

Compliance requirements:

6.3.6.1 Signage should be available to remind workers of the policies e.g. no smoking, spitting, eating, drinking in the working and storage areas; and

6.3.6.2 A designated area should be provided for smoking, eating, and drinking for workers.

7 Feeds and feeding

7.1 Origin of feed and feed substances

7.1.1 Fish/shrimp feeds should be obtained from a company registered with the Bureau of Animal Industry (BAI). Samples of fish/shrimp feeds should be inspected, monitored and tested by the Bureau of Fisheries and Aquatic Resources (BFAR) for aflatoxin and chloramphenicol analysis.

Compliance requirements:

7.1.1.1 List of sources of feed suppliers;

7.1.1.2 Records of feed purchases;

7.1.1.3 Copies of feed labels; and

7.1.1.4 Copy of BFAR inspection report.

7.1.2 Additives, premixes and compound feeding stuffs should be obtained from a company registered with the Philippine Food and Drug Administration (FDA) and monitored by BFAR.

Compliance requirements:

7.1.2.1 List of sources of feed additives (if applicable);

7.1.2.2 Records of use of feed additives; and

7.1.2.3 Protocol on the use and application of feed additives.

7.1.3 Imported feeds should be obtained from a company monitored by BFAR in compliance with prevailing national regulations and in conformity to the standards developed by FAO/WHO Codex Alimentarius Commission (CAC) (Codex) or trading partners.

Compliance requirements:

7.1.3.1 Registration from BAI of all imported feeds by the feed millers; and

7.1.3.2 Record of an updated list of feed millers monitored by BFAR.

7.2 Storage of feeds and feed materials

7.2.1 Feeds should be stored properly in a cool and dry place.

Compliance requirements:

7.2.1.1 Proper feed storage in a cool dry area free from pest following the “first in – first out” (FIFO) principle;

7.2.1.2 Records of stored/used feeds; and

7.2.1.3 Disinfection/cleaning area when mixing/preparing feeds.

7.2.2 Medicated and non-medicated feeds should be stored to minimize the risk of feeding to non-target animals.

Compliance requirements:

7.2.2.1 Area/space allocation for different types of feeds;

7.2.2.2 Permanent storage space allocation for medicated/non-medicated and leftover feeds; and

7.2.2.3 Written procedures for mixing and application of medicated feeds.

7.3 Feed quality

7.3.1 The content of additives and veterinary drugs should comply with Philippine regulations and conform to standards developed by Codex or trading partners.

Compliance requirements:

7.3.1.1 List of feed additives and other veterinary drugs used in feed formulation;

7.3.1.2 Procedures on application and withdraws in place; and

7.3.1.3 Veterinary health plan.

7.3.2 Packages should be properly labeled with the description of composition storage conditions, expiry date, feeding rate and other necessary guidance in adequate language.

Compliance requirements:

7.3.2.1 Feed tags/labels should be visible; and

7.3.2.2 Reusing of feed containers will be allowed only when it is appropriately labeled.

7.3.3 Feeds should be properly rotated.

Compliance requirements:

7.3.3.1 Systematic storage plan; and

7.3.3.2 Space allocation for inspection.

7.4 Feeding

7.4.1 Feeding practices should minimize the risk for biological, chemical and physical contaminations of feeds and animals.

Compliance requirements:

7.4.1.1 Proper hygienic practices in feeding should be observed to avoid contamination by microorganisms; and

7.4.1.2 Feed containers and utensils should be kept clean and maintained in good condition.

7.4.2 Feeding practices should ensure the maintenance of water and sediment quality.

Compliance requirements:

7.4.2.1 Feeding adjustments based on water quality;

7.4.2.2 Feeding adjustments based on life stage;

7.4.2.3 Feeding adjustments based on weather condition;

7.4.2.4 Evidence of proper feeds for species being cultured; and

7.4.2.5 Protocol on feeding based on target feed conversion ratio (FCR) compliant with BFAR recommendation.

7.4.3 Adequate records should be kept on the type, origin and use of feeds and feed ingredients.

Compliance requirements:

7.4.3.1 List of feed ingredients and their sources; and

7.4.3.2 List of species of fish used in fishmeal production.

7.5 Use of non-pelleted/fresh feed

If non-pelleted feeds or fresh feeds (trash fish, chicken entrails, etc.) are used in the farm as fish feed, the protocol on the administration of such should be provided.

Compliance requirements:

7.5.1 Records of the source, type, and mode of preparation of the fresh feed used; and

7.5.2 Proper storage requirements if supply of this type of fresh feed is in excess should also be indicated.

8 Mortalities

Facilities should maintain a suitable area for keeping dead/ill animals until safe disposal is possible.

Compliance requirements:

8.1.1 Procedures on mortality monitoring and collection;

8.1.2 Records of mortality collection;

8.1.3 Procedures on treating mortalities for disposal;

8.1.4 Space allocation for disposal of dead animals; and

8.1.5 Disposal of large-scale mortalities should be in accordance with local regulations.

9 Disease

To control the spread of diseases

9.1 Farm should be registered/ authorized by BFAR.

Compliance requirements:

9.1.1 Certificate of registration; and

9.1.2 Copies of BFAR Fish Health Officer disease monitoring report.

9.2 Processing establishments for slaughtering aquaculture animals for disease control purposes should be authorized by BFAR.

Compliance requirement:

Disease control protocol should comply with BFAR regulation.

9.3 Traceability records for movement of animals should be completed and maintained.

Compliance requirement:

Availability of movement documents.

9.4 A suitable risk-based animal health surveillance scheme should be in place.

Compliance requirement:

Veterinary health plan should be available.

9.5 Aquaculture animals intended for farming and restocking should be clinically healthy.

Compliance requirement:

Health certificate of new stocks (e.g. SPF/SPR PL for shrimp).

9.6 Aquaculture animals and products placed on the market for further processing before human consumption should be disease-free.

Compliance requirements:

9.6.1 Notification system and control of disease within the country to WHO and OIE;

9.6.2 Control of disease of animal origin should be in place; and

9.6.3 Record keeping for zoonotic disease occurrences.

9.7 Measures for the notification and control of diseases of aquatic animal origin should be in place.

Compliance requirements:

9.7.1 Training of the farmers to identify abnormalities in fish behavior and physical appearance;

9.7.2 Evidence of awareness on diseases and disease control; and

9.7.3 Notification system of observed abnormalities to BFAR.

9.8 Surveillance program should be in place for diseases of animal origin.

Compliance requirements:

9.8.1 Implementation of farm biosecurity measures according to the developed procedures by BFAR to prevent the spread of diseases that are of animal origin; and

9.8.2 The farm should have a plan for the safe removal of sick and dead fishes and eggs.

9.9 Adequate records should be kept on the occurrences of diseases that may affect food safety.

Compliance requirement:

Record keeping of previously reported cases and recent occurrence of diseases should be maintained for future reference and control measures and preventive action.

10 Drugs and chemical use

10.1 Veterinary drugs and chemicals

10.1.1 Veterinary drugs, medicated feeds, chemical and biological substances should only be obtained from registered /authorized manufacturers and suppliers.

Compliance requirements:

10.1.1.1 Should provide purchase record for the last two (2) croppings including date of purchase, name of product, quantity purchased, batch number, expiry date, name of supplier secured in dry and flood-free storage area at the site; and

10.1.1.2 Should be sourced from registered/authorized supplier by BAI.

10.1.2 Veterinary drugs, medicated feeds, chemical and biological substances should only be those permitted/registered according to national regulations.

Compliance requirements:

10.1.2.1 Should provide administration record for the last two (2) croppings including batch number, date administered, identity of fish fish/group treated, quantity or biomass of fish treated, total quantity of medicine used, date of the end of treatment, date of completion of withdrawal period, earliest date the fish is safe for consumption, name of person who administered the medicine; and

10.1.2.2 Should secure storage area of drugs and chemicals in accordance with the instruction on the label.

10.1.3 10.1.3 Substances requiring prescription should only be used under adequate supervision by a qualified expert. Non-prescription substances should be used according to manufacturer's instructions and as specified on the label.

Compliance requirements:

10.1.3.1 Should provide Veterinary Drug Order (VDO) as prescribed by a Licensed Veterinarian, preferably specializing in fish health, or upon the recommendation of the Fish Health Officer or trained farm personnel on fish health; and

10.1.3.2 Supervision may be done by the Fish Health Officer or trained farm personnel on Fish Health.

10.2 Storage and use of veterinary drugs and chemicals

10.2.1 Veterinary drugs, medicated feeds, chemicals and biological substances should be adequately stored according to instructions.

10.2.2 Withdrawal periods and residues should be verified by adequate testing.

Compliance requirement:

Drug residues should not be present in the body of animals by observing withdrawal period to ensure that the maximum residue level (MRL) is acceptable based on the standards set by Codex or trading partners.

11 Harvesting and transport

11.1 Harvesting

11.1.1 Harvesting equipment and paraphernalia should be easy to clean and sanitize. Such equipment should be kept in clean condition.

Compliance requirements:

11.1.1.1 List of harvesting equipment and their condition;

11.1.1.2 Proper storage area; and

11.1.1.3 Protocol on cleaning/sanitizing harvesting equipment

11.1.2 Harvesting should be planned in advance and timed to prevent fishery products from being exposed to unduly high temperatures.

Compliance requirements:

11.1.2.1 Standard operating procedures where timing is mainly considered; and

11.1.2.2 Farm should demonstrate preparedness during harvest (staff, equipment, etc.).

11.1.3 Practices should ensure rapid killing of harvested aquatic animals (if applicable).

Compliance requirements:

11.1.3.1 Protocol on stunning and killing aquatic animals; and

11.1.3.2 Chilling temperature should be maintained all throughout the harvest to facilitate rapid killing of aquatic animals;

11.1.4 Practices should ensure that the viability of live aquatic animals is not unduly affected due to extreme temperatures, physical damage or undue stress (if applicable).

Compliance requirement:

Standard operating procedures on harvesting taking into account the time of the day/season.

11.1.5 Fishery products should be quickly and hygienically handled, using practices that do not cause physical damage to edible part of product.

Compliance requirement:

11.1.5.1 Protocol on handling of fishery products should be in place and implemented; and

11.1.5.2 Killed aquatic animals should be cooled down quickly and maintained at temperature approaching that of melting ice in all parts of each unit.

11.1.6 Records on harvesting should be maintained for traceability purposes.

Compliance requirement:

Farm records on harvesting and transporting fishery products available for at least 2 croppings.

11.1.7 Adequate records on the buyers of final products should be kept (one-step-forward traceability).

Compliance requirement:

Farm internal traceability system or BFAR-based traceability system.

11.2 Post-harvesting and handling

11.2.1 Post-harvesting equipment and paraphernalia should be easy to clean and sanitize. Such equipment should be kept in clean condition.

Compliance requirements:

11.2.1.1 Available list of equipment used in harvesting and transport;

11.2.1.2 Written procedure on cleaning/sanitizing equipment prior to storage;

11.2.1.3 Farmers and laborers should be able to demonstrate the process on cleaning/sanitizing before and after harvest; and

11.2.1.4 All equipment for harvesting and transport should be isolated.

11.2.2 Operations such as sorting, weighing, washing, drainage, etc. should be carried out quickly, hygienically and without damage to the edible part of the product.

Compliance requirements:

11.2.2.1 Available protocol on handling the product taking into account food safety;

11.2.2.2 Duration of activity should recognize the recommended time by BFAR; and

11.2.2.3 Provision of proper area for post-harvesting activities.

11.2.3 Food additives and chemicals, which are used in contact with products, should be in compliance with prevailing legal requirements.

Compliance requirements:

11.2.3.1 List of approved additives and chemicals that may be used/added to products during post-harvest processing;

11.2.3.2 Guidelines for using additives;

11.2.3.3 Amount of additives should be in accordance with regulations of the Philippine FDA and standards developed by Codex; and

11.2.3.4 Only trained staff is authorized to perform incorporation of additives and chemicals.

11.2.4 Harvest wastes should be collected in designated areas to minimize risk of cross- contamination.

Compliance requirements:

11.2.4.1 Protocol on waste collection and disposal; and

11.2.4.2 Allocation of designated areas for collected waste during harvesting in accordance to local regulations.

11.3 Ice and water supplies

11.3.1 Clean and uncontaminated water should be available and used in sufficient amount for harvest, handling and cleaning operations.

Compliance requirements:

11.3.1.1 Water to be used during harvesting, handling and cleaning should be clean but have similar characteristics from fish's original environment to avoid stress due to sudden change of environment; and

11.3.1.2 Before slaughtering, aquatic animals should be washed with clean/uncontaminated water.

11.3.2 Ice should be sourced only from approved establishment using potable water.

Compliance requirements:

11.3.2.1 Records/traceability of ice supply including a copy of Certificate of Analysis from ice source; and

11.3.2.2 Protocol on sourcing uncontaminated ice and water.

11.3.3 Ice should be received, handled and stored under good sanitary conditions, which minimize risks of contamination.

Compliance requirements:

11.3.3.1 Ice should be stocked in clean containers; and

11.3.3.2 Ice should not be re-used or transferred from one container to another.

11.4 Transport

11.4.1 Transport should be carried out in easy to clean and clean facilities (boxes, containers, etc.).

Compliance requirements:

11.4.1.1 Transport mediums should be clean and sanitized prior to use; and

11.4.1.2 Procedure available for preparing equipment before and after use.

11.4.2 Transport conditions should be arranged to avoid contamination from surroundings e.g. air, soil, water, oil, chemicals etc.

Compliance requirements:

11.4.2.1 Standard operating procedures in transporting live or dead aquatic animals should be available;

11.4.2.2 Transport containers should be properly covered to avoid contamination as well as accidental escape; and

11.4.2.3 Monitoring records of container's temperature.

11.4.3 Live aquatic animals should be transported under physical conditions which do not adversely affect their viability.

Compliance requirements:

11.4.3.1 Transport materials should follow the legal requirements as well as the buyer's requirements;

11.4.3.2 Protocol on transporting live aquatic animals;

11.4.3.3 Monitoring record of survival during transport;

11.4.3.4 Water, temperature and oxygen supply should be suitable for live aquatic animals transport, and biomass density should be followed as required by local regulations as well as buyer's requirements.

11.4.4 Dead aquatic animals should be transported in container with ice or with ice plus water, in sufficient amount to ensure temperature of around 0°C in all products, and during the whole period of transport.

Compliance requirements:

11.4.4.1 Aquatic animals should be transported in sealed container to maintain at most 0°C temperature;

11.4.4.2 Records of temperature monitoring during transport;

11.4.4.3 Records of the amount and type of species per container should be available; and

11.4.4.4 Fish and ice ratio should follow local regulations and buyer's requirements.

11.4.5 Containers for ice plus product should allow melted water to drain away from the product.

Compliance requirements:

11.4.5.1 Design of containers should allow water (melted ice) to drain away from the product; and

11.4.5.2 Monitoring of water content in the container.

11.4.6 Based on the prevailing requirement, prohibited additives and chemicals should not be used in contact with products/live animals.

Compliance requirements:

11.4.6.1 Available list of prohibited additives chemicals being used during transport.

11.4.6.2 Records for transport of fishery products should be maintained to ensure product traceability (farm name; pond #; species; total volume; destination/buyer).

12 Biodiversity

12.1 Escapes and captive stocks

12.1.1 Screens and barriers should be available and limit the incidence of escape to the natural environment of cultured species.

Compliance requirements:

12.1.1.1 Water inlet and outlet should have proper screens and barriers that would eliminate the incidence of escapes or entry of unwanted species;

12.1.1.2 Regular monitoring of the screens and barriers; and

12.1.1.3 Records of monitoring and repair of screens.

12.1.2 Trapping devices should be installed in areas where potential escapes could happen to reduce the risk of the event happening.

Compliance requirements:

12.1.2.1 Trapping devices placed in location where potential escape could happen; and

12.1.2.2 During handling of fish, trapping devices should be installed in working stations to eliminate/reduce incidence of escape.

12.2 Predator control

12.2.1 Avoid the use of lethal methods in eradicating non-fish predators, especially those classified as vulnerable by the International Union for Conservation of Nature and Natural Resources (IUCN).

Compliance requirements:

12.2.1.1 Farms should not practice nor promote lethal means of controlling predators; and

12.2.1.2 Farms should have a procedure to avoid accidental death of predators.

12.2.2 Impact on endangered species.

Compliance requirements:

12.2.2.1 Farms should be aware of the different species in the region listed under the IUCN red list; and

12.2.2.2 Farms should have proactive measures to avoid accidental death of red-listed species.

13 Animal welfare

13.1 Survival

Compliance requirements:

13.1.1 Farms should be able to demonstrate acceptable survival rate during culture period; and

13.1.2 Records of survival in each stage of the production.

13.2 Handling and fasting

Compliance requirements:

13.2.1 Duration of fasting should be at a maximum of 24 hours only;

13.2.2 Minimum duration of fish/stocks away from water should be taken care of; and

13.2.3 During sampling, avoid practices that could potentially put the stocks into much stress (tagging, transporting, etc.).

13.3 Stunning

Compliance requirement:

Proper stunning should be done prior to bleeding.

14 Labor and community

14.1 Child labor

Compliance requirements:

14.1.1 No incidence of child labor in the farm consistent with the Labor Code; and

14.1.2 Proactive anti-child labor policy exists in the farm.

14.2 Discrimination/ Unequal treatment of employee

Compliance requirements:

14.2.1 Farms should have a proactive anti-discrimination practice; and

14.2.2 Laborers should be able to get the same rate from the same line of work regardless of their characteristics (gender, ethnic, race, etc.).

14.3 Training on health and safety

Compliance requirements:

14.3.1 All laborers should undergo health and safety orientation prior to the start of work; and

14.3.2 Health and safety procedures should be available in the working station.

14.4 First aid

Compliance requirements:

14.4.1 First aid kit should be available near the working station; and

14.4.2 Laborers should be able to demonstrate awareness on the different first aid measures.

14.5 Protective gear

Compliance requirements:

14.5.1 List of protective gear in the farm; and

14.5.2 All laborers should wear protective mask/gear when working in the farm.

14.6 Wages and working hours

Workers should receive fair and decent salary consistent with existing laws and other regulations.

Compliance requirements:

14.6.1 All laborers should receive salary based on national labor regulations;

14.6.2 All laborers should be given regular days off and be allowed to leave the farm premises; and

14.6.3 Employers should be able to show evidence of legal compliance with national legislation.

14.7 Living conditions for employees

14.7.1 Living quarters of stay-in labor should be safe and clean.

Compliance requirements:

14.7.1.1 Housing should meet local regulation for stay-in labor;

14.7.1.2 Individual bed should be provided for each laborer; and

14.7.1.3 Separate room should be provided for female staff.

14.7.2 Potable water and clean toilets should be available.

Compliance requirements:

14.7.2.1 Provision of potable water in the living quarters and also in the working station; and

14.7.2.2 Provision of decent toilet.

14.8 Social

14.8.1 Farms should not impact the access of the community to common resources.

Compliance requirements:

14.8.1.1 Farms should not impede navigation due to illegal encroachment; and

14.8.1.2 Farms should not impede local community from fishing in fishing grounds near the farms.

14.8.2 Conflict resolution

Compliance requirements:

14.8.2.1 Farms should have a written protocol on how to deal with conflicts with the community; and

14.8.2.2 Farms should interact with the community to promote good relationship.

References

PNS/BAFS 135:2014

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Aquaculture Certification Council, Inc.(ACC) and Global Aquaculture Alliance, 2002-2006. Certifying Best Aquaculture Practices: Best Aquaculture Practices Standards and Guidelines. Washington, USA.

ASC Tilapia Standard – version 1.0 January 2012. Aquaculture Stewardship Council.The Netherlands.

ASEAN, 2014. Draft Standard on ASEAN Good Aquaculture Practices (GAqP) for Food Fish (Volume 1). Establishment of Standard on ASEAN GAqP Project. Association of Southeast Asian Nations - Australia Development Cooperation Program Phase II (ASEAN-ADCP II). ASEAN Secretariat, Jakarta, Indonesia.

ASEAN, 2011. Standard on ASEAN Good Aquaculture Practices for Shrimp Farming (ASEAN Shrimp GAP). Association of Southeast Asian Nations. ASEAN Secretariat, Jakarta, Indonesia.

BFAR Fisheries Administrative Order 214 s. 2001. Code of Practice for Aquaculture.Bureau of Fisheries and Aquatic Resources.Department of Agriculture. Quezon City, Philippines.

CAC RCP 52-2003 Rev.4-2008. Recommended Code of Practice for Fish and Fishery Products.Codex Alimentarius Commission. Rome, Italy.

FAO, 2011. Technical Guidelines on Aquaculture Certification. Food and Agriculture Organization of the United Nation. Rome, Italy.

FAO, 2011. Code of Conduct for Responsible Fisheries.Food and Agriculture Organization of the United Nation. Rome, Italy.

GLOBALG.A.P. Aquaculture Standard – version 4 March 2011. GLOBALG.A.P. Secretariat. Germany.

IUCN, 2009. Guide for the Sustainable Development of Mediterranean Aquaculture 3. Aquaculture Responsible Practices and Certification.International Union for Conservation of Nature and Natural Resources.Gland, Switzerland and Malaga, Spain.VI+70 pp.

IUCN, 2009. Guide for the Sustainable Development of Mediterranean Aquaculture 2. Aquaculture site selection and site management.International Union for Conservation of Nature and Natural Resources.Gland, Switzerland and Malaga, Spain.VIII + 303 pages.

IUCN, 2007.Guide for the Sustainable Development of Mediterranean Aquaculture. Interaction between Aquaculture and the Environment.International Union for Conservation of Nature and Natural Resources.Gland, Switzerland and Malaga, Spain.107 pages.

Presidential Decree No. 442, As Amended.1974. A Decree Instituting A Labor Code Thereby Revising and Consolidating Labor and Social Laws to Afford Protection to Labor, Promote Employment and Human Resources Development and Insure Industrial Peace Based On Social Justice. Philippines.

Department of Agriculture
Technical Working Group (TWG) on the Development of the
Philippine National Standard (PNS) for Good Aquaculture Practices (GAqP)

Bureau of Fisheries and Aquatic Resources (BFAR) Members:

- Chair** : Dr.Simeona E. Regidor
Chief, Fish Health Management and Quality Assurance Section (FHMQAS)
- Co- Chairs** : Dr. Sonia S. Somga
Coordinator, National Residue Monitoring Program (NRMP), FHMQAS
- Dr. Joselito R. Somga
In-Charge, NRMP, FHMQAS
- Members** : Dr. Nelson A. Lopez
Chief, Inland Fisheries and Aquaculture Division
- Central and Regional Fish Health Officers:
- Ms. Carmencita S. Agustin, BFAR-Regional Field Office (RFO) III
Ms. Ligaya P. Cabrera, BFAR-RFO IV-A
Ms. Carolina C. Lopez, BFAR-RFO VII
Ms. Eden A. Jimenez, BFAR-RFO IX
Ms. Evie D. Lumingkit, BFAR-RFO X
Ms. Madeleine Lourdes T. Navarce, BFAR-RFO XI
Ms. Sarah Mae K. Mamalangkap, BFAR-RFO XII
Ms. Judith Mae B. Arvesu, BFAR-Central Office
- Advisers** : Atty. Asis G. Perez
Director
- Dir. Drusila Esther E. Bayate
Assistant Director for Technical Services
- Atty. Benjamin F.S. Tabios, Jr.
Assistant Director for Administrative Services
- Consultant** : Dr. Ernesto J. Morales
European Union (EU) Trade Related Technical Assistance (TRTA) Project

Bureau of Agriculture and Fisheries Standards (BAFS) Technical Secretariat:

- Advisers** : Dir. Leo P. Cañeda, CESO III
OIC-Executive Director
- Ms. Karen Kristine A. Roscom
Chief Science Research Specialist
Standards Development Division
- Member** : Mark F. Matubang
Science Research Specialist II
Technical Services Division

your partner in product quality and safety



BUREAU OF PRODUCT STANDARDS