

**Biosecurity and Health Guideline to the export-oriented  
ornamental fish/aquatic animal stakeholders for facilitation  
of exports**

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# **Biosecurity and Health Guideline to the export-oriented ornamental fish/aquatic animal stakeholders for export facilitation**

## **1. General Guidelines for registration of the ornamental fish/aquatic animal operation**

- I. The export-oriented ornamental fish/aquatic animal operation must be registered under the Department of Animal Production and Health (DAPH) and agree to the conditions stipulated by DAPH.
- II. Export-oriented ornamental fish/aquatic animal operator should submit the duly filled application (Annexure-1).
- III. Following documents should be submitted with the application:
  - a) Sketch diagram of the establishment/ farm layout
  - b) Copy of the NAQDA registration certificate
  - c) Declaration of fish species and varieties in the ornamental fish/aquatic animal operation
- IV. After the documents are submitted, DAPH officers will inspect the ornamental fish/aquatic animal operation related to the availability of adequate safety measures on biosecurity and aquatic animal health aspects.
- V. Upon recommendations of the DAPH officers, the registration certificate will be issued after the registration fee is paid according to the department website ([https://daph.gov.lk/files/uploads/pdf\\_document/0-1722843775.pdf](https://daph.gov.lk/files/uploads/pdf_document/0-1722843775.pdf)).

## **2. Biosecurity and health guideline**

### **2.1 Recommended biosecurity and health guidelines for export-oriented ornamental fish/aquatic animal establishments or farms (Farm and export)**

#### **A. Infrastructure facilities:**

- i. The ornamental fish/aquatic animal establishment or farm should be surrounded by a security fence. Unauthorized visitors and other animal species should be restricted to the premises.
- ii. At the entrance of the establishment/ farm, hand wash facility, functional foot bath or any other suitable device for disinfection should be available.
- iii. Each unit of operation should be named and displayed.

- iv. At the entrance of each unit, functional foot bath or any other suitable device for disinfection should be available.
- v. The disinfecting solutions in the foot bath should be changed periodically or when visibly soiled with debris.
- vi. Fish holding tanks should be covered by bird nets/black shade nets in outdoor facilities.
- vii. Adequate number of tanks should be available and the tanks should be numbered.
- viii. Separate set of equipment should be available for each tank/unit.
- ix. A quarantine unit should be available for newly arrived fish to the facility and a separate quarantine unit for pre-export quarantine.
- x. Concrete-lined disposal pit/incinerator should be available within the premises for disposal of dead fish and an acceptable solid garbage disposal system should be available.

#### **B. Fish/aquatic animals**

- i. Locally bred or imported healthy fish/aquatic animals should be introduced from known trusted establishments/farms.
- ii. Only introduce healthy fish/aquatic animals.
- iii. Each fish species should be reared in separate tanks.
- iv. Fish/aquatic animals reared/kept in the tanks should be in compliance with the requirements of exporting country. For an example, Australian-oriented goldfish should not be kept in water common with farmed food fish or koi carp.

#### **C. Water quality and water supply**

- i. Water supply for the establishment/ farm should be available throughout the year.
- ii. Water must be originated from a clean and uncontaminated source.
- iii. Water should be screened/filtered at the water inlet to prevent entering of wild aquatic animals to the premises.
- iv. Water outlet should have a screen/filter to prevent escape of farmed/exotic aquatic animals to the environment.
- v. The water should be tested biannually for water microbiology and maintain records.

#### **D. Feed quality and feed supply**

- i. Commercial feed should be acquired from a reliable source.
- ii. Feed should be stored in a cool dry place and should protect from vectors.

- iii. Feed stock should be maintained in a manner as the “first in - first out method” and should be used within expiry period for safeguard the quality of the compound fish feed.
- iv. The ingredients of self-mixed feed should undergo sufficient processing (e.g. boiling of raw fish/meat) and the self-mixed feed is recommend to check for the quality.
- v. Live feed (artemia, bloodworms, etc.) should be obtained from reliable sources.

#### **E. Quarantine facility and quarantine of fish**

##### **a. Quarantine facility for newly arrived fish to the premises**

- i. Indoor Quarantine unit should be available within the facility.
- ii. Adequate number of quarantine tanks should be available for the fish stock and the tanks should be numbered.
- iii. Quarantine unit should be separated from other units of the establishment/farm and maintain special care and attention in handling with separate equipment (nets/ siphon tubes, etc.).
- iv. Waste water should be filtered and disinfected before remove from the quarantine unit and should not divert into common drainage system.

##### **b. Quarantine facility for fish before export**

- i. Fish of the export consignment should be quarantined at a DAPH-approved quarantine facility.
- ii. Number of quarantine days may change depending on the import country requirements.
- iii. All the quarantine holding tanks and the surrounding area should be disinfected after termination of quarantine period of each batch.

#### **F. Cleaning and disinfection of farm and equipment**

- i. Each set of equipment should be cleaned, thoroughly washed and disinfected after use.
- ii. Fish tanks/raceways/ponds should be thoroughly washed by water and disinfected using an appropriate disinfectant. After disinfection, proper rinsing and sun drying or neutralizing chlorine products are necessary to remove toxic residues.

## G. Waste water treatment

- i. Waste water of the facility should be treated by filtration, sedimentation, chlorination, and de-chlorination.
- ii. Filtration of the waste water should be done to remove debris and dead fish before sending to sedimentation tanks.
- iii. Waste water should be directed into sedimentation tanks and should not be divert/in contact with common drainages.
- iv. After sedimentation, the waste water should be chlorinated (25-50mg/L of water) and should be kept for 24 hours before discharge and dispose treated waste water as per the guidelines given by Central Environment Authority (CEA).

## H. Fish health monitoring and surveillance

- i. Fish should be frequently observed for abnormal behaviour and remove dead/dying fish as soon as possible.
- ii. Dead/dying fish should be collected to an appropriate container without spilling and splashing water into the nearby tanks.
- iii. Dead/dying collected fish should be disposed preferably in a concrete-lined disposal pit or by incineration (burning).
- iv. Tanks with fish showing abnormal behaviour should be marked for easy identification. The employees should be made aware of handling sick fish.
- v. If a significant number of deaths observed in the farm, it should be informed to the relevant Government Veterinary Surgeon/ Veterinary Investigation Officer.
- vi. Fish tanks should be free from vectors (snails, frogs, etc.).
- vii. Veterinary Investigation Officer (VIO) will visit the establishment/ farm in every **six months** for the inspection biosecurity measures.
- viii. **Importing country health requirements should be submitted to DAPH in advance.**

Please refer the following table for general details. DAPH will proceed any other special sampling and disease testing required to obtain health certificate to export accordingly.

No	Testing parameters	Fish	Water
1	*Internal & external parasites & bacterial diseases	All fish	-
2	*Koi Herpes Virus, Spring viremia of carp virus	Carp and gold fish	-
3	**Spring viremia of carp virus	Danio spp.	
4	***Megalocytivirus	Susceptible fresh water fish species	-

5	*Pathogenic salmonella spp., <i>Vibrio</i> spp.		Packing water fresh/marine water
6	Viral nervous necrosis, Red seabream iridovirus **	Marine water fish	-

\*biannual inspection

\*\* Test as per exporting country requirement

\*\*\* For Australian export consignment only.

#### **I. Conditioning & packing**

- i. The conditioning and packing area should be an indoor facility.
- ii. Sufficient number of tanks should be available to condition each and every fish species.
- iii. The packing water should be conditioned and free from pathogenic microbes.
- iv. The tanks should be disinfected and dried after every shipment.

#### **J. Record Keeping**

- i. Record keeping is **essential** for fish health monitoring and traceability for export certification.
- ii. Each ornamental fish/aquatic animal establishment or farm should have a visitor register, routine disease and treatment logbook, health reports (biannual testing report from DAPH), water microbiology reports, and a fish register for purchased/introduced.
- iii. The records should be maintained and available for inspection, auditing and certification purposes by the Authorized officers of the DAPH.



## **2.2 Recommended biosecurity and health guidelines for export-oriented ornamental fish/aquatic animal export establishments (only Exporters)**

In addition to the **general guidelines for registration of the ornamental fish/aquatic animal operation**, the following requirements should be fulfilled.

I. The exporter should submit a declaration of each and every export consignment to Animal Quarantine Office at the time of export certification.

II. The fish to be exported must be originated from registered establishments/farms.

### **A. Infrastructure facilities:**

- i. The export establishment should be surrounded by a security fence.
- ii. Each operation should have physically operated quarantine, conditioning, and packing units.
- iii. At the entrance of the establishment, functional foot bath or any other suitable device for disinfection should be available.
- iv. Each unit of operation should be named and displayed.
- v. At the entrance of each unit, functional foot bath or any other suitable device for disinfection should be available.
- vi. The disinfecting solutions in the foot bath should be changed periodically or when visibly soiled with debris.
- vii. Each fish species should be kept in separate tanks.
- viii. Adequate numbered tanks should be available.
- ix. Separate set of equipment should be available for each tank/unit.
- x. Concrete-lined disposal pit/ incinerator should be available for disposal of dead fish and an acceptable solid garbage disposal system should be available.
- xi. Unauthorized visitors and other animal species should be restricted to the premises.

### **B. Quarantine facility for fish before export**

- i. Quarantine unit should be an indoor facility.
- ii. Adequate numbered tanks should be available.
- iii. Locally bred fish should be purchased from registered establishments/ farm only.
- iv. Imported fish intended to be exported should have a valid International Veterinary Health Certificate issued from the exporting country and a Quarantine Release Certificate from the Animal Quarantine Office, Sri Lanka.
- v. Fish should be quarantined for number of days within the quarantine facility depending on the import country requirements.
- vi. Waste water should be disinfected before remove from the quarantine unit and should not divert into common drainage system.

- vii. Waste water should be chlorinated (25-50mg/L of water) and should be kept for 24 hours before discharge and dispose treated waste water as per the guidelines given by Central Environment Authority (CEA).
- viii. All the quarantine and conditioning tanks and the surrounding area should be disinfected after termination of quarantine period of each batch.

### C. Fish health monitoring and surveillance

- i. Fish should be frequently observed for abnormal behaviour and remove dead/ dying fish as soon as possible.
- ii. Dead/ dying fish should be collected to an appropriate container without spilling and splashing water into the nearby tanks.
- iii. Dead/ dying collected fish should be disposed preferably in a concrete-lined disposal pit or by incineration.
- iv. Tanks with fish showing abnormal behaviour should be marked for easy identification. The employees should be made aware of handling sick fish.
- v. If a significant number of deaths observed in a tank/ farm, it should be informed to the relevant Government Veterinary Surgeon/ Veterinary Investigation Officer.
- vi. Fish tanks should be free from vectors (snails, frogs, etc.).
- vii. Veterinary Investigation Officer (VIO) will visit the establishment/ farm in every **six months** for the inspection of biosecurity measures.
- viii. Importing country health requirements should be submitted to DAPH in advance. DAPH will proceed any special sampling and testing accordingly. Please refer the following table for details.

No	Testing parameters	Fish	Water
1	Internal & external parasites & bacterial diseases	All fish	-
2	Koi Herpes Virus, Spring viremia of carp virus	Carp and gold fish	-
3	*Spring viremia of carp virus	<i>Danio</i> spp.	
4	**Megalocytivirus	Susceptible fresh water fish species	-
5	Pathogenic salmonella spp., <i>Vibrio</i> spp.		Packing water fresh/marine water
6	Viral nervous necrosis, Red seabream iridovirus *	Marine water fish	-

\* Test as per exporting country requirement      \*\* For Australian export consignment only.

**Please note that according to the requirement of the importing country, any other extra tests shall be conducted.**

#### **D. Conditioning & packing**

- i. The conditioning and packing area should be an indoor facility.
- ii. Sufficient number of tanks should be available to condition each and every fish species.
- iii. The packing water should be conditioned and free from pathogenic microbes.
- iv. The tanks should be disinfected and dried after every shipment.

#### **E. Record Keeping**

- i. Record keeping is **essential** for fish health monitoring and traceability for export certification.
- ii. Each ornamental fish/aquatic animal establishment should have routine disease and treatment logbook, health reports (biannual testing report from DAPH), water microbiology reports, and a fish register for purchased/introduced.
- iii. The records should be maintained and available for inspection, auditing and certification purposes by the Authorized officers of the DAPH.

## 2.3 Recommended biosecurity and health guideline to the export-oriented ornamental fish/aquatic animal import establishment (only Importers)

In addition to the **general guidelines for registration of the ornamental fish/aquatic animal operation**, the following requirements should be fulfilled.

- I. Each and every export oriented ornamental fish/aquatic animal import establishment must be registered under the Department of Animal Production and Health (DAPH) and adhere to the conditions stipulated by DAPH.
- II. The importer should follow DAPH website ([www.daph.gov.lk](http://www.daph.gov.lk)) to apply for pre-clearance approval to import ornamental fish/aquatic animal for export purpose.
- III. Veterinary health requirement for importation of ornamental fish/aquatic animal and application are available in the below link [https://daph.gov.lk/files/uploads/pdf\\_document/0-1721384088.pdf](https://daph.gov.lk/files/uploads/pdf_document/0-1721384088.pdf)
- IV. After arrival, the consignment should be subjected to minimum fourteen (14) days of quarantine at a pre-determined isolated place inspected and recommended by Animal Quarantine Officer.
- V. Unauthorized visitors and other animal species should be restricted to the premises.
- VI. The quarantine premises should be maintained with following facilities:
  - i. The Quarantine unit should be an indoor facility and restricted entry.
  - ii. Adequate number of quarantine tanks should be available for the fish stock and the tanks should be numbered.
  - iii. Quarantine unit should be separated from other units of the ornamental fish/aquatic animal establishment or farm and maintain special care and attention in handling with separate equipment (nets/ siphon tubes, etc.).
  - iv. Waste water should be disinfected before remove from the quarantine unit and should not divert into common drainage system.
  - v. If all the test reports negative, the quarantine of imported fish will be terminated.
  - vi. All the quarantine holding tanks with the surrounding area should be disinfected after termination of the quarantine period of each batch of fish.

No	Testing parameters	Fish	Water
1	Internal & external parasites & bacterial diseases	All fish	-
2	Koi Herpes Virus, Spring viremia of carp virus	Carp and gold fish	-
3	*Megalocytivirus	Susceptible fresh water fish species	-

4	Pathogenic <i>Salmonella</i> spp. , <i>Vibrio</i> spp.		Packing water fresh/marine water
5	Viral nervous necrosis, Red seabream iridovirus **	Marine water fish	-

\* For Australian export consignment only. \*\*Test as per exporting country requirement

*Please note that according to the requirement of the importing country, any other extra tests shall be conducted.*

## **2.4 Recommended biosecurity and health guideline to the export-oriented ornamental fish/aquatic animal re-export establishments (re-exporters)**

In addition to the **general guidelines for registration of the ornamental fish/aquatic animal operation**, the following requirements should be fulfilled.

The re-exporter should follow the “**Recommended biosecurity and health guideline to the export-oriented ornamental fish/aquatic animal import establishments (No 2.3)**” and “**Recommended biosecurity and health guideline to the export-oriented ornamental fish/aquatic animal export establishments (No 2.2)**” of the **Biosecurity and Health Guideline to the Export oriented ornamental fish/aquatic animal Stakeholders for facilitation of exports**.



## **2.5 Recommended biosecurity and health guideline to the export-oriented ornamental fish/aquatic animal supply/collection establishments (suppliers/collectors only)**

In addition to the **general guidelines for registration of the ornamental fish/aquatic animal operation**, the following requirements should be fulfilled.

- I. Each and every ornamental fish/aquatic animal supply/collection establishments must be registered under the Department of Animal Production and Health (DAPH) and adhere to the conditions stipulated by DAPH.
- II. The ornamental fish/aquatic animal supplier/collector should have following adequate infrastructure facilities and biosecurity measures to maintain the healthy fish stocks.
  - i. At the entrance of the supply/ collection establishment, functional foot bath or any other suitable device for disinfection should be available.
  - ii. Fish holding tanks should be covered by bird nets/black shade nets in outdoor facilities.
  - iii. Each fish species should be reared in separate tanks.
  - iv. Adequate number of tanks should be available and the tanks should be numbered.
  - v. Separate set of equipment should be available for each tank/unit.
  - vi. The tanks should be placed in order to avoid cross contamination (stocking should be done according to the farm and the fish species).
  - vii. Concrete-lined disposal pit/ incinerator should be available for disposal of dead fish and an acceptable solid garbage disposal system should available.
  - viii. Waste water should be chlorinated (25-50mg/L of water) and should be kept for 24 hours before discharge and dispose treated waste water as per the guidelines given by Central Environment Authority (CEA).
  - ix. Unauthorized visitors and other animal species should be restricted to the premises.
  - x. A supplying/collecting centre should have a quarantine facility for newly arrived fish to the premises with following requirements:
    - a. Quarantine area should be an indoor facility.
    - b. Adequate number of quarantine tanks should be available for the fish stock and the tanks should be numbered.
    - c. Quarantine area should be separated from other fish and maintain special care and attention in handling with separate equipment (nets/ siphon tubes, etc.).

- d. Waste water should be disinfected before remove from the quarantine area and should not divert into common drainage system.

### **III. Fish health monitoring**

- a. Fish should be frequently observed for abnormal behaviour and remove dead/ dying fish as soon as possible.
- b. Dead/ dying fish should be collected to an appropriate container without spilling and splashing water into the nearby tanks.
- c. Dead/ dying collected fish should be disposed preferably in a concrete-lined disposal pit or by incineration.
- d. Tanks with fish showing abnormal behaviour should be marked for easy identification. The employees should be made aware of handling sick fish.
- e. If a significant number of deaths observed in a tank/ farm, it should be informed to the relevant Government Veterinary Surgeon/ Veterinary Investigation Officer.
- f. Fish tanks should be free from vectors (snails, frogs, etc.).

### **IV. Biosecurity monitoring**

- a. Veterinary Investigation Officer (VIO) will visit the supply/ collection establishment in every **six months** for the inspection of biosecurity measures.

### **V. Record Keeping**

- a. Record keeping is **essential** for fish health monitoring and traceability for export certification.
- b. Each ornamental fish/aquatic animal establishment or farm should have routine disease and treatment logbook, biannual biosecurity report from DAPH, water microbiology reports, and a fish register for purchased/introduced.
- c. The records should be maintained and available for inspection, auditing and certification purposes by the Authorized officers of the DAPH.



## 2.6 Recommended biosecurity and health guideline to the export-oriented marine fish/aquatic animal export establishment (marine fish/aquatic animal exporter)

In addition to the **general guidelines for registration of the ornamental fish/aquatic animal operation**, the following requirements should be fulfilled.

- I. All export-oriented marine fish (consignment) should be placed in a DAPH-approved and registered export establishment.
- II. The marine fish should be collected from an area at least five kilometres away from any finfish aquaculture operation and the fish in the consignment should not contact / associated with farmed food fish or with recreational fishing.
- III. The marine fish should only be wild caught.
- IV. The marine ornamental fish/aquatic animal exporter should have **following adequate infrastructure and biosecurity measures** to maintain the healthy fish stocks at quarantine, conditioning and packing.
  - i. The marine fish export establishment should be an indoor facility.
  - ii. At the entrance of the establishment, functional foot bath or any other suitable device for disinfection should be available.
  - iii. Each unit of operation should be named and displayed.
  - iv. The disinfecting solutions in the foot bath should be changed periodically or when visibly soiled with debris.
  - v. Adequate numbered tanks should be available.
  - vi. Separate set of equipment should be available for each tank/unit.
  - vii. Clean mechanically filtered disinfected water should be used during the holding period and packing.
  - viii. Unauthorized visitors and other animal species should be restricted to the premises.
  - ix. **Fish health monitoring**
    - a. Fish should be frequently observed for abnormal behaviour and remove dead/dying fish as soon as possible.
    - b. Dead/dying fish should be collected to an appropriate container without spilling and splashing water into the nearby tanks.
    - c. Concrete-lined disposal pit/ incinerator should be available for disposal of dead fish and an acceptable solid garbage disposal system should be available.
    - d. If a significant number of deaths observed in the farm, it should be informed to the relevant Government Veterinary Surgeon/ Veterinary Investigation Officer.
  - x. **Waste water**
    - a. Waste water should not be divert/in contact with common drainages and to be treated with chlorination (25-50mg/L of water) and kept 24 hours before discharge or as per the guidelines given by Central Environment Authority (CEA).

- xi. Biosecurity monitoring**
  - a. Veterinary Investigation Officer (VIO) will visit the supply/ collection establishment in every **six months** for the inspection of biosecurity measures.
- xii. Importing country health requirements should be submitted to DAPH in advance.** DAPH will proceed any special sampling and testing accordingly. Please refer the following table for general details.

No	Testing parameters	Fish	Water
1	*Pathogenic salmonella spp, vibrio spp.	-	Packing water marine water
2	*Viral nervous necrosis, Red seabream iridovirus	Marine water fish	-

\* Testing should be done according to the exporting country requirement

*Please note that according to the requirement of the importing country, any other extra tests shall be conducted.*

**xiii. Conditioning & packing**

- a. The conditioning and packing area should be an indoor facility.
- b. The packing water should be conditioned and free from pathogenic microbes.

**xiv. Record Keeping**

- a. Record keeping is **essential** for fish health monitoring and traceability for export certification.
- b. Each ornamental fish/aquatic animal establishment should have routine disease and treatment logbook, health reports (biannual testing report from DAPH), water microbiology reports, and a fish register for purchased/introduced.
- c. The records should be maintained and available for inspection, auditing and certification purposes by the Authorized officers of the DAPH.