The Marine Products Export Development Authority

Norms for Registration of Hatcheries

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1.0 Introduction

The Coastal Aquaculture Authority Act, 2005 (No 24 of 2005) was enacted by the Parliament in June 2005 for regulating the activities connected with coastal aquaculture in the coastal area and for matters connected therewith or incidental thereto. All species of shrimp, prawn, fish or any other aquatic life cultured under controlled conditions (ponds, farm, enclosure or otherwise) in saline or brackish water in the coastal area fall under the jurisdiction of the Coastal Aquaculture Authority Act, 2005 (herein after referred to as the Act).

In exercise of the powers conferred by Section 24 of the Act, the Coastal Aquaculture Rules, 2005 (hereinafter referred to as Rules) were notified vide GSR/740 (E) dated 22 December 2005. These Rules also contain the Guidelines for regulation of coastal aquaculture as provided under Section 3 of the Act.

The Act (to be read in conjunction with the Rules and the Guidelines) makes it mandatory for all person engaged in coastal aquaculture activities in the coastal areas to obtain registration from the competent Authority. In the case of shrimp hatcheries, the Marine Products Export Development Authority (hereinafter referred to as MPEDA), Kochi shall carry out the registration as per the following norms.

The objectives of the norms for registration of shrimp hatcheries are to ensure that the hatcheries are set up and function as per the Guidelines and the seed produced and distributed to the shrimp farmers is of high quality and confirms to the standards fixed for the purpose.

2.0 Procedure for Registration of shrimp Hatcheries

2.1 Scope of registration

2.1.1 Species: Most of the shrimp hatcheries in India resort to breeding of *Penaeus monodon* (tiger shrimp) as this species is in maximum demand from the shrimp farmers. Presently, technology also exists for some of the other marine shrimp species and attempts are made by hatcheries to produce seed of such species. In view of the above, the following marine shrimp species would be considered for registration:

- *Penaeus monodon*
- *Fenneropenaeus indicus*
- *Fenneropenaeus merguiensis*
- *Marsupenaeus japonicus*
- *Metapenaeus spp.*

Shrimp hatcheries proposing to breed marine shrimp species other than those listed above would be required to seek separate registration for such species from MPEDA.

2.1.2 Siting: All shrimp hatcheries located in the coastal areas as defined in the Act and further defined in Government of India’s Notification S.O 74 (E) dated 23 January 2006 will be considered for registration under these norms.

2.1.3 Type of shrimp hatcheries/ seed production centers: The stages of shrimp seed production encompass broodstock holding and maturation, spawning, nauplii and post-larvae (PL) rearing. Besides the above, the hatchery may also have facilities for
live feed culture. In the changing scenario of shrimp seed production, hatcheries may vary from units that can produce only nauplii, nauplii to PL or combined units with all necessary facilities such as broodstock rearing, nauplii production and their rearing up to PL stages.

2.2 Application for registration and the fees to be paid

2.2.1 Every application for registration of shrimp hatchery shall be made to the Regional or Sub-Regional Centre of MPEDA, located in the maritime States in Form I (as prescribed in Annexure 1) obtainable from the above-referred Centres or to be downloaded from the website of the MPEDA (www.mpeda.com).

2.2.2 Each application shall be accompanied by a list of infrastructure facilities available at the hatchery and a declaration signed on a non-judicial stamp paper of Rs Fifty only (Rs 50/-). The above information shall be furnished in the form prescribed in Annexures 2 and 3.

2.2.3 Every application for registration of shrimp hatchery specified in column (1) of Table below shall be accompanied by the fee specified in the corresponding entry in column (2) of Table 1.

<table>
<thead>
<tr>
<th>Type and Production Capacity of the hatchery</th>
<th>Fees to be paid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small-scale units with a production capacity up to 10 million PL-20 per annum. This category also includes centers producing only nauplii.</td>
<td>Rs 2 000/-</td>
</tr>
<tr>
<td>Medium-scale units with a production capacity above 10 million but up to 30 million PL-20 per annum.</td>
<td>Rs 5 000/-</td>
</tr>
<tr>
<td>Large-scale units with a production capacity of above 30 million PL-20 per annum.</td>
<td>Rs 10 000/-</td>
</tr>
</tbody>
</table>

2.2.4 The fees for registration shall be payable in the form of Demand Draft in favour of ‘MPEDA’.

2.3 The manner for considering application for registration

2.3.1 On receipt of an application, the Regional Centre/ Sub-Regional Center shall verify the particulars given in the application.

2.3.2 A Panel shall inspect the hatchery within one month of receipt of the application to ensure that the hatchery meets the norms specified in the application form and the Guidelines. The composition of the Panel shall be as below:

(i) Deputy Director, Regional Centre of MPEDA - Chairman
(ii) Assistant Director of Fisheries of the concerned District (State Govt.) - Member
(iii) Nominee of the District Collector - Member
(iv) Representative of the All India Shrimp Hatcheries Association (AISHA) - Member
2.3.3 At least three persons from the above-referred Panel shall be present during the inspection, which shall also form the quorum.

2.3.4 A notice of at least 24 hrs shall be served on the hatchery prior to the inspection visit of the Panel. A copy of the inspection report shall be submitted to the Director, MPEDA within a period of ten days from the date of inspection.

2.3.5 In case any defect is noticed in the application, the attention of the applicant shall be drawn in writing, requesting him/her to rectify the defect within a specified period (ten days) and in case of failure of the applicant to rectify the defect within such period, the registration shall be refused.

2.3.6 Where the application for registration is refused, the reason for such refusal shall be recorded in writing and a copy of the same along with the order of refusal shall be furnished to the applicant. However, the fee once remitted will not be refunded to the applicant under any circumstances.

2.3.7 The MPEDA or any officer authorized by MPEDA may require the applicant to furnish within a specified period such additional information as may be considered necessary for the purpose of registration and every such applicant shall be bound to furnish such information within a specified period (15 days).

2.3.8 The MPEDA, by order, may refuse an application for registration of a shrimp hatchery if the applicant fails to furnish the information asked for or furnishes incorrect information; a copy of the order together with reasons for such refusal shall be communicated to the applicant. Any person aggrieved by an order of refusal may within thirty days from the date of receipt by him of a copy of the order of refusal or cancellation, as the case may be, appeal to the Chairman, MPEDA, who may affirm, vary or set aside such order.

2.3.9 If during the period when the registration of the shrimp hatchery is in force, the owner thereof desires to make any change in the seed production capacity of the hatchery or change in species, he/she shall apply to the MPEDA at least thirty days in advance and the MPEDA shall make such enquiries, as considered necessary before order can be passed for effecting the change. Where the MPEDA agrees to the change, details of such change shall be entered in the certificate of registration. Other changes in respect of infrastructure facilities shall be recorded in the register maintained by the Regional Center/Sub-Regional Center of MPEDA.

2.3.10 The hatchery for which registration is sought should be either owned by the applicant or on lease for a period of minimum five years.
2.4 Issue of certificate of registration

2.4.1 Where the application for registration is not refused, a certificate of registration shall be granted in Form II (as prescribed in Annexure 4) and shall be subject to the terms and conditions specified in the certificate. The Director, MPEDA shall sign the certificate.

2.4.2 The original certificate shall be sent to the owner of the hatchery, the duplicate to the MPEDA Head Office at Kochi and the office of the Deputy Director/ Assistant Director of the respective Regional Centre/ sub-Regional Centre of MPEDA will retain the triplicate copy.

2.5 Renewal of registration

The registration of hatcheries is valid for a period of five years. Every application for renewal of registration of shrimp hatchery shall be made before two months of the expiry of such registration to MPEDA in Form I and upon satisfaction MPEDA shall renew the registration for a further period of five years.

2.6 Issue of duplicate certificate (in case of loss/ mutilation)

Procedures for issue of duplicate certificate in case of loss / mutilation shall be the same, as laid down under the process of new registration.

2.7 Records of registration

The Regional Centre/ sub-Regional Centres of MPEDA shall maintain a register of all hatcheries registered by them. A consolidated register shall be maintained at the Head Office of the MPEDA.

2.8 Inspection

During the period of registration, the concerned Regional/ Sub-regional Centre of MPEDA will inspect the hatcheries on a quarterly basis to ensure that the norms and Guidelines are meticulously followed. The concerned Regional/ Sub-regional Centre of MPEDA shall also maintain the records of such inspections. The hatcheries shall provide the inspection team uninterrupted access to the infrastructure as well as the records.

2.9 Cancellation

The registration shall be cancelled by MPEDA on non-compliance of the conditions stipulated in the Certificate of Registration or on non-fulfillment of the conditions in the declaration furnished by the owner of the hatchery.

2.10 Appeal

Any person aggrieved by an order of cancellation may, appeal to the Chairman MPEDA within a period of 30 days of the receipt of such intimation of cancellation. The Chairman at his discretion may affirm, amend or set aside such order by giving reasons thereof.
2.11 Interpretation

In case of any doubt on an interpretation of any of the conditions stipulated in the norms, the decision of the Chairman, Coastal aquaculture Authority shall be final.

3.0 Criteria for selection of hatcheries

3.1 Infrastructure

The design and infrastructure facilities of a shrimp hatchery would vary according to the activities undertaken by the hatchery. In some hatcheries all the activities right from maturation to production of PL – 20 stages would be undertaken while in others only nauplii would be raised to PL- 20. Keeping in view the above developments, the hatchery infrastructure to be considered for registration shall be as follows:

3.1.1 Hatcheries with facilities for all stages of operation: Shrimp hatcheries undertaking maturation of brood stock, production of nauplii and their rearing to post – larval stages (up to PL - 20) would be included under this category. Such hatcheries would be required to have permanent construction with identified facilities for quarantine and holding of brood stock, spawning tanks, larval and post - larval rearing areas and nursery (this may be optional). The other infrastructure facilities would include structures for live feed production, microbiology and pathology laboratories, stores and designated areas for packing. The staff amenities would include accommodation, toilets and common facilities for meetings/ recreation and canteen.

(i) Water purification: To allow clean sea water with minimum amount of impurities to enter the hatchery, the water should be treated to remove suspended solids, dissolved nutrients and bacterial and viral pathogens. This should be achieved by following a sound water treatment protocol, which would include:

- Sedimentation
- Water chlorination and dechlorination
- Filtration with sand filter or activated carbon filters
- Cartridge filtration up to 1 micron size
- UV filtration/ ozonisation

(ii) Power supply: The hatchery should have a three - phase electrical connection to ensure un-interrupted power supply. The hatchery should also have standby generator(s) to meet the emergency requirements.

(iii) Other machinery: The other important machinery that are required for discharging basic functions would include pumps (for sea water supply) and air blower.

3.1.2 Hatcheries with facilities for limited stages of operation: Shrimp hatcheries under this category would include facilities undertaking production and or raising of nauplii to post larval stages i.e., up to PL - 20. In such cases, the facilities to be included for consideration of registration of the hatchery would be restricted to only those items, which are necessary for completion of the activity.

3.1.3 Other infrastructure and communication facilities: The premises of each hatchery should be properly fenced with secured gates for movement of staff, vehicles and other authorized visitors. The fencing should ensure that stray animals do not enter
the premises. The hatcheries should also ensure that common property resources, such as beaches or sea facing areas are not fenced, as this would put the neighboring community into inconvenience. The hatcheries should also have adequate freshwater supplies for the purpose of washing, cleaning and drinking. The hatcheries should have an approachable road for easy access and adequate communication facilities such as telephone, fax and email.

3.2 Manpower

Each shrimp hatchery with facilities for all stages of operation should have an adequate complement of supervisory, technical and supporting staff to operate the facilities. The required categories of staff, their number and qualification is provided in Table 2 below:

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Staff Category</th>
<th>Number</th>
<th>Qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Manager</td>
<td>1</td>
<td>Graduate</td>
</tr>
<tr>
<td>2.0</td>
<td>Hatchery Technicians</td>
<td>2</td>
<td>Graduate with specialization in Fisheries/ Aquaculture</td>
</tr>
<tr>
<td>3.0</td>
<td>Laboratory Technician</td>
<td>2</td>
<td>-do- or Trade Certificate in Laboratory Technology</td>
</tr>
<tr>
<td>4.0</td>
<td>Hatchery Supporting staff</td>
<td>6</td>
<td>Higher Secondary/ SSLC</td>
</tr>
<tr>
<td>5.0</td>
<td>Laboratory Supporting Staff</td>
<td>2</td>
<td>-do-</td>
</tr>
<tr>
<td>6.0</td>
<td>Electrician/ Pump man</td>
<td>2</td>
<td>Trade Certificate</td>
</tr>
<tr>
<td>7.0</td>
<td>General duty Staff (Cleaner/ watchman/ cook, etc)</td>
<td>2</td>
<td>Minimum qualification up to Std. VIII.</td>
</tr>
</tbody>
</table>

Hatcheries with facilities for limited stages of operation such as raising of nauplii to PL 20 may have a smaller complement of staff, depending on the type of activity to be conducted by the hatchery.

4.0 Important management norms

4.1 Biosecurity (including health and hygiene)

*Hygiene and Sanitation:* The hatchery should have a clean appearance and should adopt high standards of hygiene to ensure strict bio-security. The equipments and tools used in the hatchery should be made from non-toxic materials and should be cleaned and sterilized/ disinfected properly. Different sections of the hatchery such as maturation, hatching, etc should have minimum inter-connections to avoid contamination from one section to the other. The live feed section should be completely separate from the other sections. As far as possible, separate paraphernalia should be used for different tanks/ sections, etc.

The movement within different sections of the hatchery should be restricted to the persons assigned to the section. Separate staff should be designated for each section of the hatchery and frequent inter-changing of staff from one section to the other should be avoided. It should also be ensured that the staff deployed possesses adequate knowledge
of the task allotted to them and also the maintenance of biosecurity environment in the hatchery.

To ensure general hygiene and sanitation it must be ensured that the flooring is properly plastered and there are no holes and crevices to allow stagnation of water and growth of undesirable organisms. The flooring should also have proper slope to allow flow of water into the outlets. The hatchery should be adequately illuminated.

The inlet and outlet pipes should be provided with screens and stoppers to ensure that there is no entry or escape of animals. The stoppers will also ensure that water due to backflow/ backlash does not enter the hatchery.

The area where seed is packed for distribution should be free from any contamination and no unauthorized person should be allowed to enter this section.

A flow chart of activities/ movements between one section to the other should be maintained and strictly followed. Entry and exit points of each section should have footbaths and other wash facilities to minimize contamination. Monitoring of the quality control parameters should be carried out on a daily basis and no relaxations should be made on biosecurity aspects of the hatchery.

4.2 Health Management (including laboratory facilities)

It is well known among aquatic animal health scientists/ workers, if feed and environment in hatchery are well managed, the animals will have less stress. Stress is usually followed by disease infection. Treatment of disease should be carried out only when it has been scientifically diagnosed. When disease occurs, there should be efficient measures to prevent disease outbreak to other hatcheries and natural water sources. Adequate bio-security measures may be adopted to avoid disease spread and the following are recommended for adoption by the hatchery manager:

- Larval health and water quality in hatchery should be regularly monitored and examined. If some symptoms of disease occur, it should be diagnosed in the laboratory.
- Post-larvae should be nursed in as much a healthy manner as possible so that they do not carry diseases to grow-out pond.
- The use of permissible drugs and chemicals should be discontinued sufficiently long before harvesting the larvae for stocking in grow out ponds in order to prevent drug and chemical residues being left in the body.
- For diseases caused by poor hatchery management, good preventive measure is the best solution.
- There should be effective measures to prevent the outbreak and spread of shrimp disease to nearby hatcheries and water sources.

Instructions for quick transportation of shrimp fry without application of drugs and chemicals during packing should be given to the farmers.

The hatcheries will ensure that no infected seed is sold or allowed to be disposed in a manner that may have an impact on the fauna and flora of the surrounding open waters.

4.2.1 Diagnostic facilities in the hatchery and monitoring of health status of the animals: It is recommended that the hatcheries should maintain the following set of
equipment, etc to perform the diagnostic functions and also ensure sound health of the animals:

(i) Autoclave, (ii) Electronic Balance, (iii) Microscope, (iv) PCR Equipment, (v) Refrigerator, (vi) pH meter, (vii) Salinometer, (viii) Dissolved Oxygen meter, (ix) Kits for testing other nutrients. Besides these the hatchery should also maintain adequate stocks of distilled water and the required glassware and chemicals.

4.3 Seed specifications

The following specifications are prescribed for production and marketing of shrimp seed by the hatcheries:

- Seed supplied by the Hatcheries must be healthy.
- They should survive standard stress tests conducted in the hatchery for temperature, salinity (or both) or chemicals such as formalin.
- They should not be found infected with viruses such as WSSV and MBV. The disease free status should be supported with PCR or other similar test report.
- Healthy seeds should have the characteristics under naked eye and microscopic observations as detailed in Annexure 5.

4.4 Feed and feed management

Live, fresh and artificial feeds constitute the key factors for the success of hatchery and nursery operations. They also contribute to the bulk of the input costs in a hatchery. Remnant feed will generally cause deterioration of water quality in hatchery tanks. If quality feed is used with a proper feed management, it can prevent feed waste and deterioration of water quality and the hatchery effluents will not subsequently cause adverse impacts on environment and coastal ecosystem. The recommendations for good practices for feed and feed management are as follows:

- Dry feed should be of high quality, which is stable and can remain long enough in the water without decay.
- Live feed production should be need-based and such populations of organisms should not be maintained over longer periods.
- Hatcheries should have adequate facilities for artemia hatching.
- The storage spaces for dry and live feed should be separate. They should be properly ventilated.
- Dry feed should be kept in dry, cool and indoor area.
- More live feed should be used, if facility and clear weather are available.
- Fresh feed should be well prepared and efficiently managed.
- Feeding and its schedule should be recorded daily, in detail.
4.5 **Use of drugs and chemicals**

Some drugs and chemicals may be toxic to shrimp larvae or accumulate in their bodies, which may have some effects later in grow-out pond. If they are frequently applied without proper management, chemicals left in hatchery effluent may pollute water source and subsequently have strong impact on the coastal ecosystem. This also causes drug resistance. Recommendations for drug and chemical include:

- Banned drugs and chemicals should not be used under any circumstances. A list of such banned drugs, chemicals and pharmacologically active compounds is given in Annexure 6.
- Operator should strictly follow the drug prescription. The description should confirm that the product is harmless to environment and humans, period of application, dosage and storage instructions shown by manufacturer.
- If there are any toxic substances left in hatchery, they must be decomposed or detoxified before discharge.
- Application of drug and chemical should be recorded in detail.
- Drugs should be stored in cool place and away from children and pets.
- Expired and unused drug must be destroyed in a proper way, which will not pollute the surrounding environment.

4.6 **Traceability and record keeping**

All records pertaining to the operation of the hatchery should be maintained. The various procedures adopted in the hatchery right from the sourcing of brood stock to the sale of seeds should be properly recorded. A systematic approach to record keeping can help in effective monitoring. Ensuring traceability in the seed production phase is a pre-requisite for a standard hatchery and therefore all records/ register maintained by the hatchery will be subjected to verification during the inspections. Such arrangements should also be adequately demonstrated to ensure that the traceability programme is in place.

4.7 **Waste water management**

4.7.1 **Effluent and Waste:** The effluents from the hatchery should be properly treated before discharge and the hatchery should have necessary treatment facility for treating the highest amount of wastewater produced during the production period. The effluents discharged from the hatchery should meet the standards stipulated for the same and should be disposed of in a manner not polluting the environment.

In general, hatchery effluents will consist of nutrient loads, sediment sludge and some chemicals. Good hatchery management practice will be able to improve effluent quality and reduce its volume and subsequently environmental impact. Hatchery waste and garbage should be well packed in plastic bag and kept in
close container before disposal. Recommendations on effluent and waste management are as follows:

- Effluent discharges should be reduced to the minimum possible.
- The hatcheries should focus on good feeding practice and efficient use of permitted drugs and chemicals so as to minimize their residues in the wastewater.
- Drugs, chemicals, feed and other supplies should be stored in a proper place so as to prevent pollution of water source during heavy spells of rain, accident, floods, etc. The hatcheries should have a contingency plan for treatment of pollution in case of an emergency.
- Effluents should be treated in a qualified treatment system before discharge.
- In order not to disturb the sedimentation bed of water source, velocity of discharge should be slow and gentle.
- Effluent should not have impacts on discharged site and surrounding natural water resources.
- Effluent should not be discharged to freshwater sources and plantation.
- Hatchery garbage and waste should be properly treated or disposed.
- The hatcheries should have in-house composting facility for solid waste of organic composition.
- Hatchery management should follow government regulations.
- Hatchery manager should continuously evaluate and improve waste treatment system.

4.7.2 **Effluent Treatment System:** The effluents from the hatchery should be treated adequately before discharge and the discharged water should conform to quality standards prescribed. In order to treat the discharge, an effective effluent treatment system should be set up in the hatchery. The standards for the source water as well as the final discharge point for hatcheries are furnished in Table 3.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Parameter</th>
<th>Intake point</th>
<th>Discharge point</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PH</td>
<td>6.0-9.5</td>
<td>6.0-9.0</td>
</tr>
<tr>
<td>2</td>
<td>Total suspended solids (Mg/litre)</td>
<td>100 or less</td>
<td>50 or less</td>
</tr>
<tr>
<td>3</td>
<td>Soluble Phosphorus (Mg/liter)</td>
<td>0.5 or less</td>
<td>0.3 or less</td>
</tr>
<tr>
<td>4</td>
<td>Total ammonia nitrogen</td>
<td>5 or less</td>
<td>3 or less</td>
</tr>
<tr>
<td>5</td>
<td>BOD (Mg/liter)</td>
<td>50 or less</td>
<td>30 or less</td>
</tr>
<tr>
<td>6</td>
<td>Dissolved oxygen (Mg/liter)</td>
<td>4 or more</td>
<td>5 or more</td>
</tr>
<tr>
<td>7</td>
<td>Salinity</td>
<td>No discharge above 800 Mg/liter chloride in to fresh water</td>
<td>No discharge above 550 Mg/liter chloride into fresh water</td>
</tr>
</tbody>
</table>
Annexure 1

The Marine Products Export Development Authority
(Ministry of Commerce & Industries, Government of India)

Form I

Application for Registration of Shrimp Hatchery
(In Triplicate)

<table>
<thead>
<tr>
<th>Book No…</th>
<th>Form No……</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Particulars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Name &amp; Address of the Applicant in full with Telephone, Fax &amp; E-mail</td>
</tr>
<tr>
<td>2.0</td>
<td>Status of the Hatchery (Public Ltd./ Private/ Proprietary/ Partnership)</td>
</tr>
<tr>
<td>3.0</td>
<td>Location of the Hatchery (Village, District, State)</td>
</tr>
<tr>
<td>4.0</td>
<td>Type of Hatchery (species produced)</td>
</tr>
<tr>
<td>5.0</td>
<td>Installed capacity</td>
</tr>
<tr>
<td>6.0</td>
<td>Date of starting production</td>
</tr>
<tr>
<td>7.0</td>
<td>Statement of annual production</td>
</tr>
<tr>
<td>8.0</td>
<td>Whether owned or leased</td>
</tr>
<tr>
<td>9.0</td>
<td>If on lease, specify the lease period and also attach copy of the lease deed.</td>
</tr>
<tr>
<td>10.0</td>
<td>List of machinery and facilities available in the hatchery (to be filled in as per the proforma at Appendix - 1 attached to this application)</td>
</tr>
<tr>
<td>11.0</td>
<td>No. of qualified technical personnel employed, their names and qualifications</td>
</tr>
<tr>
<td>12.0</td>
<td>Mode of payment of registration fee (Rs.)</td>
</tr>
</tbody>
</table>

Place:                    Signature of the Applicant with name and address
Date:                    

Note: A layout of the hatchery and necessary approvals of local bodies such as the village Panchayat, etc should be submitted along with this application.
Proforma for furnishing details of infrastructure available at the shrimp hatchery

Belonging to …………………… at…………………………………………………………………

<table>
<thead>
<tr>
<th>Physical facilities</th>
<th>Capacity</th>
</tr>
</thead>
</table>

**A. Seawater intake system**

Seawater required/ day:

No and capacity of the pump:

Filtration system and number of pressure sand filter installed:

UV sterilization:

No of storage tanks:

Capacity of each storage tank:

No of chlorination tanks and capacity:

No. of sedimentation tanks and capacity:

**B. Freshwater intake system**

Pumps:

HDPE/cement overhead tank:

**C. Maturation/spawning**

No. of maturation tanks:

Capacity of each tank:

No. of spawning/hatching tanks:

Capacity of each tank:

**D. Larval Rearing**

No. of larval rearing tanks:

(i) early larval rearing:

(ii) post- larval rearing:

(iii) Post-larval rearing tanks in open area (optional):

**E. Live feed Algal culture Lab**

Indoor algal culture tanks (FRP):

Outdoor tanks:

No. of artemia hatching tanks:

Capacity of each tank:
F. Common facilities

Generators:
Air blower/compressor:
Staff quarters:
Office buildings:

G. Hatchery Laboratory

Lab equipments PCR and its related accessories:
Balance:
Glassware:
Air conditioning:
Deep freezer:
Other items:

Whether any antibiotics are used in the hatchery?
If so, the details of such usage:

Place: Signature:
Date: Name and Address of the Hatchery Owner

Recommendation:

On physical verification, the Inspection Panel of MPEDA is satisfied/not satisfied with the facilities available in the hatchery and the procedures adopted therein to qualify for registration.

Panel Members (name & address) Signature with Date
Annexure 3

The Marine Products Export Development Authority
(Ministry of Commerce & Industries, Government of India)

Declaration to be furnished by the owner of the hatchery along with the application
(to be signed on Rs. 50/- non-judicial stamp paper)

1.0 I------------------------------------------------------------------ , aged-------- son of --------------------------------- and
owner of the -------- million per annum installed capacity shrimp seed hatchery at (location) in
-----------(District) of -----------------------------------------(State), hereby declare that I have read and
understood the MPEDA Norms for Registration of Shrimp Hatcheries and agree to abide by the conditions laid
down in the Norms .

2.0 I declare that I have already set up/ provided the physical facilities specified in Appendix 1 of the
Norms and that I shall continue to provide such facilities, failing which the registration granted to me
may be cancelled by MPEDA.

3.0 I hereby declare that I am following and shall continue to follow the Guidelines specified in
Coastal aquaculture authority Rules, 2005, failing which I agree to the cancellation of the registration.

4.0 I undertake to produce in my hatchery only seeds following the specifications laid down in Appendix
3 of the scheme, failing which I agree to the cancellation of the registration.

5.0 I also undertake to carry out improvements, additions, alterations or up-gradation suggested by
MPEDA, failing which I understand that the MPEDA can cancel my registration.

6.0 I also agree to abide by any instruction that may be issued by the MPEDA from time to time
regarding the operation of the hatchery, failing which I understand that the MPEDA can cancel my
registration.

7.0 I also agree to the inspection of the hatchery by any officer of MPEDA at any time, with prior
intimation.

8.0 I also agree to provide the production records, laboratory analysis sheets, etc. to the officers of
MPEDA.

9.0 I also agree to submit to MPEDA, any returns regarding production of seeds and the running of the
hatchery and maintenance of any record as may be specified by MPEDA from time to time.

10.0 I also agree to the issue of a quality certificate to accompany the consignments of seed shipped
from my establishment (self-certification)

11.0 I also agree to settle disputes if any on the quality of the seeds with farmers with due diligence.

Place: 
Signature with address and seal
Date:
The Marine Products Export Development Authority  
(Ministry of Commerce & Industries, Government of India)

**SEED SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Parameter</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Colour</td>
<td>Light grey, brown or black.</td>
</tr>
<tr>
<td>2</td>
<td>Activity</td>
<td>Actively swimming.</td>
</tr>
<tr>
<td>3</td>
<td>Feeding</td>
<td>Readily accept and eat feeds.</td>
</tr>
<tr>
<td>4</td>
<td>Shell</td>
<td>Clean shell.</td>
</tr>
<tr>
<td>5</td>
<td>Muscle</td>
<td>Clear, smooth and thick, completely filling the space below the gut.</td>
</tr>
<tr>
<td>6</td>
<td>Gut</td>
<td>Full gut.</td>
</tr>
<tr>
<td>7</td>
<td>Muscle Gut Ratio</td>
<td>Tail muscle to hindgut ratio of 4:1 or more.</td>
</tr>
<tr>
<td>8</td>
<td>Hepatopancreas</td>
<td>Animals without hepatopancreas should not be more than 10 % of the animals tested.</td>
</tr>
<tr>
<td>9</td>
<td>Rostral spines</td>
<td>More than five rostral spines should be observed in at least 80 % of the tested animals.</td>
</tr>
<tr>
<td>10</td>
<td>Body length (BL)</td>
<td>Above 11.0 mm.</td>
</tr>
<tr>
<td>11</td>
<td>Size variation</td>
<td>Less than 10 %.</td>
</tr>
<tr>
<td>12</td>
<td>Pigmentation</td>
<td>Chromatophores well defined and located along the mid-ventral line.</td>
</tr>
<tr>
<td>13</td>
<td>Appendages</td>
<td>Intact, without any deformity.</td>
</tr>
<tr>
<td>14</td>
<td>MBV/ WSSV</td>
<td>Negative.</td>
</tr>
<tr>
<td>15</td>
<td>Stress test survival</td>
<td>Above 80 %.</td>
</tr>
<tr>
<td>16</td>
<td>Swollen hind gut</td>
<td>Less than 10 %.</td>
</tr>
<tr>
<td>17</td>
<td>Fouling organisms</td>
<td>Less than 20 %.</td>
</tr>
</tbody>
</table>
### The Marine Products Export Development Authority
(Ministry of Commerce & Industries, Government of India)

List of antibiotics and other pharmacologically active substances banned for use in aquaculture

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Name of the antibiotic/chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Chloramphenicol</td>
</tr>
<tr>
<td>2.0</td>
<td>Nitrofurans including: Furaltadone, Furazolidone, Furylfuramide, Nifuratel, Nifuroxime, Nifurprazine, Nitrofurantoin, Nitrofurazone</td>
</tr>
<tr>
<td>3.0</td>
<td>Neomycin</td>
</tr>
<tr>
<td>4.0</td>
<td>Nalidixic acid</td>
</tr>
<tr>
<td>5.0</td>
<td>Sulphamethoxazole</td>
</tr>
<tr>
<td>6.0</td>
<td>Aristolochia spp. and preparations thereof</td>
</tr>
<tr>
<td>7.0</td>
<td>Chloroform</td>
</tr>
<tr>
<td>8.0</td>
<td>Chlorpromazine</td>
</tr>
<tr>
<td>9.0</td>
<td>Colchicine</td>
</tr>
<tr>
<td>10.0</td>
<td>Dapsone</td>
</tr>
<tr>
<td>11.0</td>
<td>Dimetridazole</td>
</tr>
<tr>
<td>12.0</td>
<td>Metronidazole</td>
</tr>
<tr>
<td>13.0</td>
<td>Ronidazole</td>
</tr>
<tr>
<td>14.0</td>
<td>Ipronidazole</td>
</tr>
<tr>
<td>15.0</td>
<td>Other nitroimidazoles</td>
</tr>
<tr>
<td>16.0</td>
<td>Clenbuterol</td>
</tr>
<tr>
<td>17.0</td>
<td>Diethylstilbesterol</td>
</tr>
<tr>
<td>18.0</td>
<td>Sulphonamide drugs (except approved Sulphadimethoxine, sulphabromomethazine and sulfaethoxpyridazine)</td>
</tr>
<tr>
<td>19.0</td>
<td>Fluoroquinolones</td>
</tr>
<tr>
<td>20.0</td>
<td>Glycopeptides</td>
</tr>
</tbody>
</table>