



The Marine Products Export Development Authority
Ministry of Commerce & Industry, Government of India
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MPEDA is coming up with a certification scheme for hatcheries for the production and supply of high health, disease free and antibiotic free seeds. The DRAFT scheme with standards, procedures etc. are available in the websites of MPEDA www.mpeda.gov.in ,RGCA www.rgca.org.in , NaCSA www.nacsampeda.org and NETFISH www.netfishmpeda.org for a period of 60 days. Suggestions/comments from the stakeholders and public are invited.

Sd/-

B SREEKUMAR
SECRETARY

DRAFT

SCHEME FOR CERTIFICATION OF SUSTAINABLE AQUACULTURE

1. SHRIMP HATCHERIES : ANTIBIOTIC FREE SEED PRODUCTION (ASP) – Version 1

1.1. Introduction:

Aquaculture has emerged as the only alternative source for generating food fish for food security and nutritional security in the context of declining catches from the seas and increasing number of mouths to feed. Growth of aquaculture has resulted in emergence of a number of disease problems for the species cultured and different measures have been adopted by the industry for grappling with the disease problems. Use of antibiotics and other pharmacologically active substances is one of the measures adopted for tackling disease problems as well as for ensuring success in hatchery operations.

Use of antibiotics in aquaculture has resulted in several issues such as drug residues in the foodfish leading to health issues and also poses the problem of Anti Microbial Resistance (AMR). This has resulted in the consumers demanding residue free foodfish and as a consequence the regulatory authorities have started putting in place various measures for ensuring residue free foodfish. This has necessitated freeing aquaculture from the use of antibiotics and other pharmacologically active substances. India being a country dependent on sustained increase in seafood exports for earning valuable foreign exchange has to take suitable measures in this direction. Sustainability of aquaculture is also related to the biosecurity protocols and the responsible use of chemicals and pharmacologically active substances in hatcheries.

In order to address the issue MPEDA conducted a series of stakeholder consultations, in places like Chennai, Ongle and Kakinada to find a lasting solution for antibiotic usage in hatcheries. One of the decisions of the stakeholder consultation was to start a certification scheme for hatcheries for production and supply of antibiotic free seeds. To this end MPEDA constituted a committee comprising two representatives of All India Shrimp Hatcheries Association (AISHA), two knowledgeable farmers and officials of MPEDA for formulating the scheme for certification of hatcheries for production and supply of antibiotic free seeds.

Certification of hatcheries for production of antibiotic free seed has emerged as one of the main interventions to free Indian aquaculture from the use of antibiotics. This is also seen as a tool to improve the consumer confidence.

To produce quality seed, free from residues of antibiotics and chemicals, hatcheries need to operate adopting Better Management Practices (BMPs). Ensuring proper biosecurity measures and adoption of science based BMPs, including responsible use of chemicals and antibiotics are the keys to this. There are four main routes by which pathogens could enter the production units; Water is one the main source and therefore the water intake and filtration system should be adequate to care of this threat. The other threats being animals; the feed and cross contamination through human beings, which needs to be taken care in the Good Management Practices. Therefore, the present certification system lays stress on these aspects and the standards are formulated to achieve this.

The certification scheme is in conformity with the FAO guidelines on Certification of Aquaculture.

Objectives:

- a. To formulate the standards for certification of hatcheries for production of antibiotic free seed as a first step towards sustainable aquaculture.
- b. To formulate procedures for auditing the standards and to introduce a rating system based on surveillance of the Better Management Practices adopted by the hatchery.
- c. To have a market oriented certification system, which will enhance the consumer confidence in Indian Aquaculture produce.

2. Definitions:

Export Oriented Species. Shrimp Species having export potential which includes *P.monodon*, *L.vannamei*, *F.indicus*, *P.merguensis*, Scampi, or any other species to be decided by the Competent Authority. The new species will be added to the list on fulfilling the following criteria:

- (a) Export Potential of the species
- (b) Complete Technology available
- (c) Geographical area in which the species can be cultured
- (d) The new species will be added to the list on fulfilling the Export Potential of the species .

Unit: A Hatchery, involved in production of young ones (seeds) for supplying to grow out farms having a direct or indirect relation to seafood exports.

Aqua Farm: A farm is a grow out facility producing export oriented finfish / shellfish species

Hatchery: A hatchery is a place for artificial breeding, hatching, and rearing through the early life stages of aquatic animals—finfish and shellfish in particular. The term also includes the Nauplii Rearing Centres, which source nauplii from other sources and rear to Post Larval stages for supplying to farms.

Certification: A certification process that assesses conformity of a product or process to the certification standards. It adopts a procedure by which accredited Certification Bodies, based on an audit, provide written or equivalent assurance that food safety management systems and their implementation conform to specified requirements of product or process

Authorized Signatory of the application: The person authorized to apply for certification under the scheme for certification of hatcheries. Such authorization is valid only if all the partners/members of Executive Board of Society/Trust/Board Of Directors unanimously approved by a special resolution (Certified by Company Secretary in case of Private/ Public Ltd Companies).

Competent Authority: The Competent Authority for the scheme will be the Chairman, MPEDA or an officer duly authorized by a written office order from Chairman, MPEDA.

Standards: The standards mean the standards defined for the purpose of enabling the hatchery operators to match the hatchery infrastructure and hatchery BMPs in order to qualify for certification under the scheme. The standards are science-based and developed by a committee constituting hatchery experts, farm operators and officials after a series of consultations, obtaining and incorporating public comments etc. The standards will be improved on a continuous basis to ensure seed quality.

Compliance levels: represent the level of compliance required to be met by the hatchery for different standards prescribed. The levels are classified as Major, Minor and Recommendations. The Major requirements are of mandatory nature and have to be achieved by the hatchery for getting the certification. The minor requirements are important and have to be complied by the hatchery to maintain the quality of the seed, environment protection and social responsibility. As regards to the requirements of the recommendatory nature, the standards are advisories for maintaining seed quality and to meet the social and environmental responsibility.

3. Standards:

The standards for certification of hatcheries for production of antibiotic free seeds are proposed to be developed through a process of consultations with the experts in the field of hatchery operation, government agencies involved in R&D, Regulatory agencies, and developmental bodies and general public. The standards are being developed by following the international norms for transparency like ISEAL code.

The standards proposed will be improved on a continuous basis in keeping with the modification in the scope of the scheme, improvements in the technology and scientific knowledge to ensure disease free and residue free seed production.

The standard developed DRAFT no. 1 is annexed as **annexure 1**.

4. Guidelines for Good Hatchery Management

The hatcheries are entitled to adopt any science based good management practices for producing and supply of quality seeds free of any antibiotic residues. For producing disease free and residue free shrimp seed, it is imperative to ensure good biosecurity set up as well as responsible use of chemicals, while adopting any good hatchery operating guidelines. A DRAFT Hatchery operating guideline for antibiotic free seed production is given in **annexure 2**.

5. Guidelines for Auditors:

The certification procedures involve audit of the hatchery facility and surveillance of the implementation of the BMPs in hatchery operation. There is a designated auditor selection panel/committee comprising of experts chosen from different fields such as hatchery operation, aqua farming, environmental protection and social welfare. The panel/committee will evaluate the applicants, who have applied for selection as auditors under the scheme. Committee will follow the norms for selection of auditors.

The auditors will be assigned to carry out audit of hatcheries on a random basis and they will have no prior knowledge about the hatcheries they have to audit. They will have to follow the hatchery audit format and guidelines provided to them and enter their observations/findings in the respective columns. The guidelines for auditors is given in **annexure 3 (under preparation)**

6. Procedure for implementing the hatchery certification scheme:

The Procedure for implementation of the hatchery certification scheme is given in **annexure 4**

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Standards for Hatcheries

Use of antibiotics in aquaculture has resulted in several issues such as drug residues in the aquatic products leading to health issues and also poses the problem of Anti Microbial Resistance (AMR). This has resulted in the consumers demanding residue free fish/shrimp and as a consequence the regulatory authorities have started putting in place various measures for ensuring residue free seafood/fish. This has necessitated freeing aquaculture from the use of antibiotics and other pharmacologically active substances. India being a country dependent on sustained increase in seafood exports for earning valuable foreign exchange has to take suitable measures in this direction. Sustainability of aquaculture is also related to the biosecurity protocols and the responsible use of chemicals and pharmacologically active substances in hatcheries. Certification of hatcheries for production of antibiotic free seed has emerged as one of the main interventions to free Indian aquaculture from the use of antibiotics. This is also seen as a tool to improve the consumer confidence.

To achieve these, science based standards which are achievable and improved on a continuous basis are developed. The standards, which help the applicants for certification, are structured in such way that assessment of environmental impact, social impact and food safety aspects can be carried out by the applicant themselves and facilitate auditors. The standards address foodsafety, animal welfare, workers welfare, environment, traceability and major sustainability aspects through all stages of hatchery seed production.

Scope:

The standards apply to all locations and scales of shrimp hatcheries in India. The standards are intended for shrimp hatchery operators in the country and designed to help all category of shrimp Hatchery seed producers.

Species covered:

The standards apply more specifically to the native species, *Penaeus monodon* and *P. indicus* and the exotic species, *Litopenaeus vannamei*, but not limited to these species.

Unit of certification:

The unit to which the standards apply for the purpose of certification is individual hatchery when individual hatchery applies for certification

The standards and the guidelines for adoption are framed based on FAO guidelines on responsible aquaculture / Good Aquaculture Practices. The certification standards are also in conformity with the FAO guidelines on certification.

Guiding Principles:

- 1. Complying with the existing national and local laws and regulations:** Any activity that is carried out as form of business or commercial activity should be carried out according to the law of the land. Therefore, it is pertinent to ensure compliance with the existing national and local laws/regulations
- 2. Hatchery operations shall be carried out in an ecologically and environmentally responsible manner :** Conduct hatchery operations to minimize impacts on surrounding resource users. Conscious efforts to reduce effluents from hatchery and/or ensuring the quality of effluents meet the standards prescribed for hatchery discharge should be made.
- 3. Responsible use of chemicals and production of residue free shrimp seed:** Use chemicals and drugs that may have adverse impact on ecosystems and human health in a responsible manner and avoid antibiotic and unwanted chemical treatments. Chemical treatments in themselves can cause stress to delicate organisms like shrimps. The management practice should be oriented for prevention of diseases both in hatcheries and farms.
- 4. Biosecurity:** Avoid release or escape of exotic species and transgenic into environment. Escape of exotic species into the environment can cause negative impacts on the native populations in several ways.
- 5. Traceability:** Keeping proper records of each and every actions involved in the day to day hatchery operations is part and parcel of Good Management Practices followed. This would not only help the decision makes to fall back on the records to verify what went wrong in operations and to identify the root cause of failure, if any. Keeping records would also help in auditing of the hatchery operations by an external audit party (Government regulatory body or a third party).
- 6. Community relations and Social responsibility :** Hatcheries may follow the CSR guidelines of the Government and the applicable labour laws.

The Standards:

1.	<p>Complying with the existing national and local laws and regulations</p>
	<p>Justification: Aquaculture is a business producing food for human consumption using natural resources that have multiple users and impacts. Therefore the local government and the developmental and regulatory authorities of the central government should have the pertinent information on the units engaged in production. The national certification program for hatcheries requires that all hatchery units desirous of supplying their produce for exports comply with the existing laws pertaining to establishment of hatchery units and operation related environmental regulations.</p>
	<p>Operationalization / execution: Hatcheries desirous of supplying their produce to export oriented aquaculture units shall possess required documents in proof of compliance to existing national and local laws and regulations. In the coastal areas, the hatchery units shall possess the registration with Coastal Aquaculture Authority and/or enrollment by MPEDA. Hatcheries located beyond the jurisdiction of the Coastal Aquaculture authority shall have the registration of the respective state government and/or enrollment by MPEDA.</p>
2	<p>Hatchery operations shall be carried out in an ecologically and environmentally responsible manner</p>
	<p>Justification: Coastal and inland areas are having diverse and ecologically sensitive environments, which are breeding grounds or nursery grounds for a number of aquatic species and also veritable habitats for birds and other wild life. Mangroves are also considered as barriers for coastal erosion due to winds, waves and storms besides forming excellent resources for the local people.</p>
	<p>Operationalization / execution:</p> <ol style="list-style-type: none"> 1. Location of Hatcheries: Hatcheries shall not be located in the legally prohibited areas such as mangrove areas and other wet land areas. Hatcheries shall possess necessary clearances from the Coastal Aquaculture Authority or the competent authority with regard to the nature of the land on which the hatchery is located 2. Ensuring animal health and environmental health: Hatchery operations shall be carried out in conformity with any form of Good Management Practices/Better Management Practices/Best Management Practices and the hatchery shall possess a written down Standard Operating Procedure developed thereon.
3	<p>Food safety: Responsible use of chemicals and production of residue free shrimp seeds</p>
	<p>Justification: Increasing consumers across the world are demanding healthy and safe food. Presence of residues of harmful substances such as antibiotics and other pharmacologically active substances is undesirable and a potential</p>

	<p>human health hazard. The consumers are entitled to get safe food that is free from residues of drugs and chemicals that may pose health hazard to them. Detection of residues of banned antibiotics and residues of others beyond the mandated residue limits may lead to rejection of export consignments and the consequent economic losses to the concerned.</p> <p>Apart from the residues of the drugs and chemicals, the microbial contamination and hygiene also are critical for supply of safe food. Improper use of antibiotics and chemicals can lead to antimicrobial resistance that can affect shrimp/fish/other species or even human beings.</p> <p>These concerns have resulted in imposing ban on use of antibiotics such as Chloramphenicol and Nitrofurantoin metabolites in almost all countries. Apart from these, there is selective ban on use of chemicals such as malachite green, hormones, etc., in many countries.</p>
	<p>Operationalization / execution:</p> <ol style="list-style-type: none"> 1. Ensure safety of the water sourced for hatchery intake purpose. The intake water could be the source of pesticides and chemicals. Therefore hatcheries should be vigilant on the quality of the water, carry out chemical analysis when there is potential contamination of the water source. 2. Not to use any pharmacologically active substances. <ul style="list-style-type: none"> • Adopt good health management practices and thereby prevent disease problems. • It is proven that seed production can be carried in a commercially successful manner without using antibiotics and pharmacologically active substances. • Hatcheries shall keep declaration by the input suppliers to the effect that no banned drugs or other pharmacologically active substances are applied in the product. 3. Use only inputs that are approved/registered with CAA: <ul style="list-style-type: none"> • Hatcheries should have a list of inputs approved/registered by the CAA and ensure that they do not use any input that does not feature in the list. • Hatchery technical personnel should be aware of the ingredients of the inputs and the harmful effects of the pharmacologically active substances.
4	<p>Biosecurity:</p>
	<p>Justification:</p> <p>Success of hatchery operation depends on the prevention of infectious pathogens in the system. There are a number of stages in hatchery operation associated with potential risk of introduction of pathogens in to the system. Each hatchery shall identify the critical points where there is risk of introduction of pathogen and the risk can be mitigated by adopting suitable biosecurity measures. A written down Standard Operating Procedure (SOP) detailing the Health Management Plan for disease prevention and control and ensuring biosecurity shall be available. The SOP should be a comprehensive</p>

	document that covers each stage or process of the production cycle and updated based on new scientific information of biosecurity protocols. All workers in the hatchery should be trained in the biosecurity protocols to be followed.
	<p>Operationalization / execution:</p> <ol style="list-style-type: none"> 1. Each hatchery should develop and display its own set of Standard Operating Procedures (SOPs) outlining the control protocol for the hatchery including: <ol style="list-style-type: none"> i) Details of the critical control points (CCPs) and describing how to perform each task to control the associated biosecurity risk. ii) Describe disinfection protocols for hatchery personnel and visitors moving into and out of hatchery, hatchery implements and other materials being brought into the hatchery etc. iii) Describe the procedures and indicators for monitoring the health status of the larvae and post larvae based on systematic and daily observations and keepings records of the observations. 2. All hatchery workers should be aware of the documents and understand the SOPs. The understanding of the SOPs may be verified by interview during hatchery audit. 3. All hatchery workers should be given training on the biosecurity protocols and hygiene protocols. 4. Hatcheries using, indigenous non-SPF broodstocks shall have a quarantine facility for screening the stock for pathogens of interest. 5. All broodstock and other live aquatic organisms brought into the hatchery should be screened for pathogens or accompanied by Health status documents. 6. Containers and implements used for transportation of live animals (Larvae/Post larvae/Brooders/Spawners) shall be cleaned and disinfected and shall be sterilized before reuse.
5	Record keeping and Traceability:
	<p>Justification:</p> <p>Traceability is a system of keeping records throughout the value chain and chain of custody of produce from hatchery to the end user/consumer. It is a system to assure the end user that all the production process are in compliance with the standards for food safety, and carried out in an environmentally sustainable and socially acceptable manner. The records may be maintained electronically in the form of databases or papers, registers, files or documents or a combination of any of these.</p>
	<p>Operationalization / execution:</p> <p>Record keeping should be carried out diligently with utmost care and records maintained in a proper manner.</p> <ol style="list-style-type: none"> 1. Records of each production unit should be kept separately so as to facilitate traceability and audit of each unit separately, preferably indicating. <ol style="list-style-type: none"> i. Name or identity (identification number if any) of the unit ii. Capacity of the unit iii. Stocking date, number of nauplii/larvae of post-larvae/fry stocked and its source. iv. Details of feed used in each production cycle of the hatchery operation should be kept, particularly the live feed, used has to be recorded.

	<ol style="list-style-type: none"> v. Records of each input used in the hatchery production cycle, shall be maintained with product name, batch/lot number and manufacturer name. 2. Sales record with date, time, quantity, details of the purchaser and mode of transport shall be maintained. 3. Water quality testing, disease diagnostic tests and tests for screening antibiotic and other pharmacologically active substance are highly desirable. Name of the laboratories and the results thereof also may be included in the records 4. In order to ensure the traceability along with whole chain of custody, hatchery will have to keep record of dealings with one step backward and one step forward link. 5. The hatchery shall keep records of any customer complaints related to the seed supplied. They shall also keep records of the investigations carried out on the complaints and action taken to address/mitigate the grievances/complaints 6. Hatcheries shall retain the records for a minimum period of two years.
6	Community relations and Social responsibility:
	<p>Justification: Aquaculture has to be carried out as an activity co-existing with other interests in the coastal and inland rural areas. Every effort needs to be made to maintain good community relations.</p>
	<p>Operationalization / execution:</p> <ul style="list-style-type: none"> • While setting up hatchery unit, the management shall take into consideration of the other conflicting interests in the locality and ensure that the traditional rights of the local people are not restricted/curtailed. Hatcheries shall not block the traditional access to fishing and other common resources. • Hatchery Management shall interact with the local community to avoid any conflicts. • Hatchery shall engage labour from the local communities as far as possible. • Hatchery shall pay wages to the workers in keeping with the local and national laws. • Hatchery shall abide by the state and national laws regarding working hours, compensation for overtime and holidays. • Hatchery shall not engage forced or bonded labour in any form. Workers shall have the right to terminate their employment with reasonable notice. • Hatchery shall not employ any child labour. • Hatchery shall not discriminate workers in compensation, worker training, promotion, termination and retirement • There shall not be any sort of harassment to the workers. • The hatcheries may also follow the applicable CSR guidelines.

Appendix 1

CAA Standards for effluents from hatcheries

Parameter	Frequency	Final Discharge Point	
		Coastal Marine Waters	Creek or estuarine courses
pH (standard units)	Monthly	6.0 - 8.5	6.0 - 8.5
Total suspended solids (mg/L)	Quarterly	≤ 100	≤ 100
Soluble phosphorus (mg/L)	Monthly	≤ 0.4	≤ 0.2
Free ammonia nitrogen (mg/L)	Monthly	≤ 1	≤ 0.5
5-day BOD (mg/L)	Quarterly	≤ 50.0	≤ 20.0
Dissolved oxygen (mg/L)	Monthly	≥ 3.0	≥ 3.0
Total Nitrogen (as N) mg/l	Monthly	2.0	2.0

N. B. For hatcheries located in freshwater areas : *No discharge with chloride content of above 800 mg/L into freshwater areas.*

OPERATING GUIDELINES FOR HATCHERIES INTENDING TO GET CERTIFICATION FOR PRODUCTION OF ANTIBIOTIC FREE SHRIMP SEEDS

The Hatcheries are entitled to follow any scientific hatchery management practices. However, the management practices shall at the least conform to the guidelines issued by the Coastal Aquaculture Authority. As the focus of the certification is on production and supply of antibiotic free seed, the hatcheries shall possess the necessary infrastructure for ensuring required biosecurity measures and adopt Hatchery BMPs.

Following the general guidelines for adoption of Good Management Practices for production and supply of antibiotic free seed.

Infrastructure:

- a. Fencing delimiting the hatchery premises to ensure the biosecurity
- b. Gated entrance with a tyre bath.
- c. Water intake system, filtration system.
- d. Separate facilities for Water treatment and reservoirs for Maturation and larval culture.
- e. Physically separate production facilities for Maturation and Larval culture.
- f. Maturation section shall have separate provisions for broodstock holding and maturation, spawning, hatching and nauplii holding. An area demarcated for microscopic examination for quality of egg and nauplii etc. Spawning section can have facility for individual or mass spawning.
 - i. *Fresh feed preparation room*: This is another high risk area for pathogen introduction into the production system. Fresh food is also important component in the maturation process. This section must have door and windows with mosquito mesh to avoid entrance of flies and other insects.
- g. Larval culture section should have separate facilities for algae, artemia and laboratory area for daily observation of the animals
 - i. Microalgae section to have two areas, pure culture area and mass production area
 - ii. Artemia cyst hatching section should preferably be a separated from the larval section and have hatching tanks with its own air and water pipeline system.
- h. A properly designed hatchery must have a system for effluent treatment system with provision for sedimentation, chemical and physical treatments etc.
- i. Diagnostic labs facilities including PCR for testing of viral, bacterial and other relevant pathogens should be available. If one lab is servicing more than one unit an agreement between the lab the units shall be made available.
- j. A physically separate packing area with required facilities for seed packing shall be available.

Hatchery BMPs

Good hatchery operations target ensuring ideal water quality conditions for different stages of life cycle of the fish/shrimp/crab so as to ensure optimal production, prevent contamination, environmental deterioration due to effluent, and maintain good community relations. The term Better Management Practices hints at continuous efforts in improvement in achieving the objectives of hatchery operations in successive cycles of operations.

Standard Operating Procedures (SOPs):

Each hatchery should develop and display its own set of Standard Operating Procedures (SOPs) outlining the control protocol for the hatchery covering brood stock management, seed production plan, hatchery water preparation, feed and feeding, larval and post larval health management, harvesting and post harvest handling etc. It should be a comprehensive document that covers each stage or process of the production cycle. The document should include details of all the critical control points (CCPs) and describe how to perform each task to control the associated risk. Once the protocol for hatchery operation is documented, the SOPs should be given to all personnel, and a copy should be available for all workers in an accessible place (dining room, meeting room etc.).

As new information becomes available, it will be necessary to update or modify the SOPs, and any changes must be communicated to all personnel. Any updated version of the SOPs should have the date of the modification and a clear statement that the new version supersedes all previous versions.

All workers should sign a document indicating that they have understood the SOPs, and that they will comply with all requirements.

Training in biosecurity maintenance should be an important component of the hatchery process. All workers of hatchery should be trained on the SOPs and should be aware of the biosecurity protocols.

HACCP approach for development and implementation of biosecurity protocols:

The HACCP approach is a preventive risk management system based upon a hazard analysis and can be applied as a risk management tool to control vital pathogens at shrimp research and production facilities. The critical control points (CCP) identified for the maturation and hatchery stages of shrimp production are:

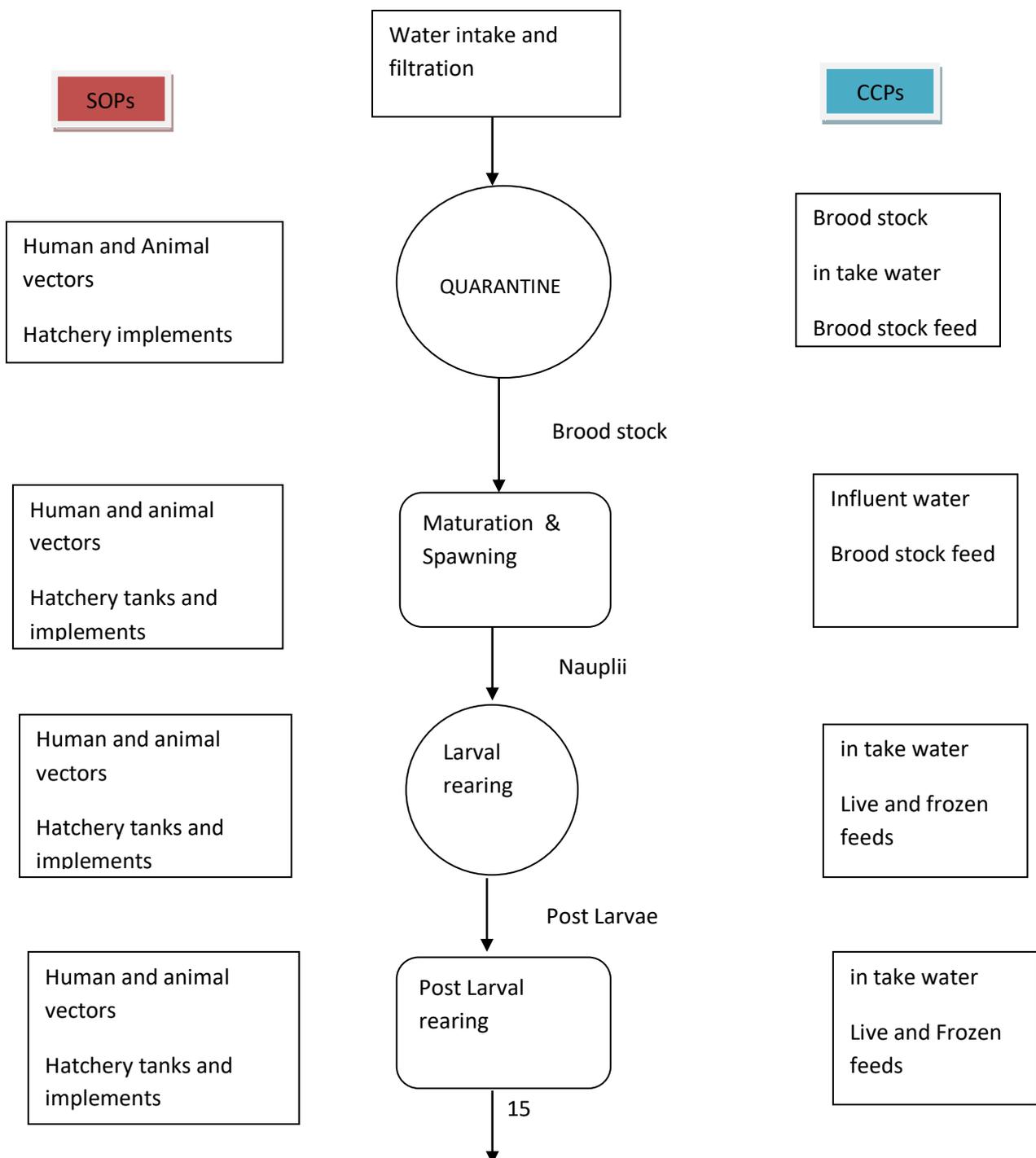
- i) Water intake system
- ii) Brood stock, nauplii
- iii) Feeds, particularly the live and wet feeds.
- iv) ETP
- v) Entry points – entry points to maturation, spawning, larval, post larval sections shall be provided with disinfection facilities like hand wash, foot dip

etc. There should be disinfection of the hatchery implements and feeds arriving into each section.

- vi) The other potential risks to be covered by the implementation of the SOPs and HACCP are disease vectors (human and animal), facilities and equipment. Seed packing and transport, Vehicle including trays/tanks

A Flow diagram should be created for the hatchery facility detailing all operations and the movement of shrimp and larvae through the production system and CCPs must be identified for each area (Quarantine, maturation, hatchery, algal culture, artemia production etc.). The following areas, but not limited to them, are to be considered.

Hatchery operation flow chart depicting the components, CCPs and SOPs to prevent disease occurrences



Post larvae ready for stocking

Implements,
Human and
Animal vectors

Seed Packing
and Transport

Facility entrance: Control at entrance for workers, administrative employees, vehicles and other disease vectors

Water treatment: All the water used in production units must be treated appropriately to kill pathogens and their hosts

Maturation: Quarantine of incoming broodstock, checking and disinfection of fresh feed, cleaning of tanks and waste and airlines disinfection of broodstock, egg, nauplii and equipment.

Hatchery: Regular dry-out periods; cleaning and disinfection of buildings, tanks, filters, water and airlines and equipment; quality control and disinfection of fresh feeds; separation of working materials for each room and each tank.

Algae: Restricted entrance of personnel to algal laboratory and tank facilities; equipment water and air disinfection; sanitation and quality control of algae and chemical used.

Artemia: Cyst disinfection, nauplii disinfection, tank and equipment cleaning and sanitation

Restriction of entrance: to the hatchery in general and each area in particular to the authorized personnel: all staff and administrative personnel entering the production areas must comply with the procedures in the SOPs.

Special care must be taken with vehicles (personnel or shrimp transport vehicles) because they may have visited other hatcheries or shrimp farms before arrival.

Entry of potential disease vectors into the hatchery facility must be controlled. Some shrimp viruses are found in a range of terrestrial animals such as insects and birds. While it is not possible to control all potential animal vectors, their entry can be minimised by the use of physical barriers such as fencing, while nets or mesh can be used to exclude birds and insects. Aquatic animal can be excluded by ensuring that there are no direct means of entry from open-water sources, especially via inlet pipes and drainage channels. All water entering the facility should be filtered and disinfected, and all drainage channels should be screened and/or covered, where possible, to prevent entry and establishment of wild aquatic animals.

i. Quarantine (Broodstock/nauplii)

For *P monodon* hatcheries which are not using SPF there should be a quarantine facility to keep and evaluate the broodstock quality. The broodstock should remain in the facility at least for two days. During this period a section of Pleopod can be used for extracting DNA and carrying out PCR analysis for potential viral pathogens. The faecal matter can be used to test AHPND, HPV, MBV or EHP.

If for any reason testing for detection of presence of potential viral pathogens and testing faeces samples to detect other non OIE pathogens could not be carried out in the quarantine station, the spawners produced from these animals must be screened for the diseases by PCR tests.

Apart from the molecular tests the physical examination of the brood stock for its size, health and condition of the gills, appendages and general body surface has to be carried out.

For *L vannamei*, SPF broodstock imported from approved suppliers and routed through the AQF at Chennai (or any other designated AQF) or purchased from approved Broodstock Multiplications Centres in the country supplying SPF broodstock.

ii. Maturation and spawning

Water quality in Maturation and spawning tanks should be kept as steady as possible. In the case of *L vannamei*, depending on the mating techniques adopted, the males and females can be kept in the same tank or separate tanks. The size of the tanks are usually larger than those used for *P monodon*. Spawning room is separated from maturation room and spawning can be done individually or collectively depending on the production targeted, space availability and manpower etc. Maintenance of optimal water temperature and other water quality parameters is very important in getting good results.

The Maturation section requires supply of fresh feeds for getting good results. In view of the risk involved in introduction of pathogens, the feed preparation should be carried out in a separate biosecure room and measures such as footbath, hand etc., should be provided for preventing any cross contamination have to be taken

iii. Larval rearing

Larval rearing involve stocking of nauplii in the Larval rearing tank and providing optimal water quality conditions, providing required quality and quantity feeds, monitoring larval health, sampling and population estimation etc. The activities should be guided to maximise the production without compromising on the larval quality. The required biosecurity protocols for disease prevention and HACCP

protocols for preventing contamination with chemical and drug residues have to be followed

Evaluating larvae and post-larvae quality - Three level observations:

Level 1. – Visual inspection of larviculture tank and in visual observation of the animals in a glass jar – gives a primary information of the condition of the larvae. The observation of swimming behaviour, response to light, distribution in the water column, etc., are indicators of the condition of the larvae.

Level 2. Observation of the animals with a microscope in the laboratory – to determine development stage, the degree of gut repletion, presence of epibionts, necrosis etc.

Level 3 – complex analysis, usually done in specialized laboratories. May include microbiological analysis, histology, PCR etc.

Summary of Level 1 observations and scores

Criteria	Score	Stage	Observation
Swimming activity		All stages	Daily (2) observations
Active (>95%)	10		
Intermediate (70-95%)	5		
Weak (on bottom) (<70%)	0		
Phototropism		Zoea	Daily (2) observations
Active (>95%)	10		
Intermediate (70-95%)	5		
Weak (on bottom) (<70%)	0		
Faecal string (cord)		Zoea	Daily (2) observations
Present (90-100%)	10		
Intermediate (70-90%)	5		
Absent (<70%)	0		
Luminescence		Mysis	Night observations of the tank
Absent	10		
Present (<10%)	5		
Abundant (>10%)	0		
Homogenous stage		All stages	Daily (2) observations
High (80-100%)	10		

Intermediate (70-80%)	5		
Low (<70%)	0		
Intestinal contents		Mysis	Daily (2) observations
Full (100%)	10		
Half (50%)	5		
Empty (<20%)	0		

Summary of Level 2 assessments and scores

Criteria	Score	Stage	Observation
Hepatopancreas (lipid vacuoles)		All stages	Daily (2) observations
High (>90%)	10		
Moderate (70-90%)	5		
Low (<70%)	0		
Intestinal content		All stages	Daily (2) observations
Full (>95%)	10		
Moderate (70-95%)	5		
Empty (<70%)	0		
Necrosis		All stages	Daily (2) observations
Absent (0%)	10		
Moderate (<15%)	5		
Severe (>15%)	0		
Deformities		All stages	Daily (2) observations
Absent (0%)	10		
Moderate (<10%)	5		
Severe (>10%)	0		
Epibionts		All stages	Daily (2) observations
Absent (0%)	10		
Moderate (<15%)	5		
Severe (>15%)	0		
Baculovirus		Mysis	Daily (2) observations
Absent (0%)	10		
Moderate (<10%)	5		
Severe (>10%)	0		

When all of these level 1 and 2 observations are made and recorded for each tank of larvae at each stage and the appropriate scores given in each case, an overall picture of larval health can be derived, with higher numbers relating to healthier larvae and vice versa. With experience, it becomes easy to judge the overall health

of each tank of larvae and to recommend courses of action to combat the problems, depending on the scores obtained.

Level 3 observations utilizing molecular techniques are not normally required until post larvae are ready to be transferred to on-growing facilities. PCR techniques are commonly used to test for major pathogens.

iv. Post Larval Rearing

Post larval observation and quality assessment

Summary of post larval quality assessment using Level 1 procedures:

Criteria	Observation	Qualitative assessment	Score
Moulting	Moult in the water	< 5%	10
	Moult not sticking to head of PL	5-10 %	5
		➤ 10%	0
Swimming Activity	Activity level of post-larval behaviour	Active	10
		Intermediate	5
		Low	0
Direct observation of Luminescence	Night time observation of the tank	< 5%	10
		5-10 %	5
		>10%	0
Survival rate and clinical history of tank	Estimation of survival rate in each tank	>70%	10
		40-70 %	5
		<40 %	0

Summary of post larval quality assessment using Level 2 procedures

Criteria	Observation	Qualitative assessment	Score
Muscle Opacity	Opaque muscle in tail of PL	<5%	10
		5-10%	5
		>10 %	0
Deformities	Deformities in limbs and head	<3%	10
		3-10%	5
		>10%	0
Size variation of CV	Calculation of CV of post larval size	<15%	10

		15-25%	5
		>25 %	0
Gut contents	Degree of fullness of digestive tract	Full	10
		Moderate	5
		Empty	0
Colour of the Hepatopancreas	Relative colouration of Hepatopancreas	Dark	10
		Pale	5
		Transparent	0
Condition of the Hepatopancreas	Relative quantity of lipid vacuoles	Abundant	10
		Moderate	5
		Low	0
Epibiont fouling	Degree of fouling by eipibionts	<5%	10
		5-10%	5
		>10%	0
Melanization	Melanization of body or limbs	<5%	10
		5-10%	5
		>10%	0
Gill Development	Degree of branching of gill lamelle	Complete	10
		Intermediate	5
		Slight	0
Intestinal Peristalsis	Movement of gut muscle	High	10
		Low	5
Baculovirus	Daily (2) observation of Mysis	Absent (0%)	10
		Moderate (<10%)	5
		Severe (>10%)	0
Muscle to Gut Ratio	Comparision of ratio between muscle and gut thickness	>3:1	10
		1-3:1	5
		1:1	0
Stress Test	If <75%, re-testing is recommended	>75%	

Post larval quality assessment using Level 3 procedures

Level 3 assessment should be carried out on a statistically determined number of post-larvae (usually 150 for a population of >10000) from each tank (in order to

provide a 95% confidence level at 2% prevalence in the result) using PCR techniques for detection of important pathogens. Only acceptable result for any of these viral pathogens is a negative result, which would be given a score of 10.

v. Seed packing and transport

Seed packing and transport area is a neglected area with regard to the biosecurity aspects. However, as this area comes in contact with the public and the material they bring for seed transport etc., there is a potential risk of pathogen transmissions into the hatchery. Therefore, proper care need to be taken ensure that the public that are entering the area and the implements they bring should be properly disinfected.

vi. Record keeping

Keeping proper records of each and every actions involved in the day to day hatchery operations is part and parcel of Good Management Practices followed. This would not only help the decision makes to fall back on the records to verify what went wrong in operations and to identify the root cause of failure, if any. Keeping records would also help in auditing of the hatchery operations by an external audit party (Government regulatory body or a third party)

Records of all inputs purchased and their daily use shall be documented systematically so that the mass balance of the items can be assessed/verified at any time. The product wise details such as: Batch number, Manufacturing date, expiry date, Quantity etc., should be part of the record.

Records should also be kept on the sourcing of broodstock. Observation on the quality of brood stock; Quantity and date of purchase, quarantine done if any, pathogens tested and identified if any, number of broodstock used for eye-stalk ablation and maturation, spawning and hatching records; nauplii produced and its quality assessment records; stocking records, quality assessment records, survival and yield records in Larval and Post Larval sections etc., have to be necessarily maintained.

Records of sale of seeds to farms also are very important. Details of farms to which the seeds are supplied should be available.

Hatcheries shall also keep records of tests carried out for effluents from hatcheries.

vii. Use of antibiotics and chemicals:

Use of antibiotics and other pharmacologically active substances shall be avoided. Prevention of disease occurrences shall be the norm. Only products and inputs registered with the regulatory authority (CAA) should be used.

There is ample evidence that hatcheries can be run in a commercially successful way without using any antibiotics or other pharmacologically active substances.

viii. Effluent Management:

Adoption Better Management Practices in hatchery operations can improve quality of effluent water and reduce effluent quantity. The Hatchery management should make efforts to improve effluent quality to meet the effluent standards specified by the Coastal Aquaculture Authority. In addition, the hatcheries operating beyond the jurisdiction of CAA shall ensure that the chloride content of the effluent shall be less than the limit given in the standard.

ix. Community relations – Labour welfare and social responsibility

Hatchery and other aquaculture operations should be carried out in harmony with the local communities. Hatcheries shall not obstruct the access of the local people to their traditional uses. Hatchery management shall try to get the confidence of the local communities by interacting with them on a regular basis, providing common amenities as part the Company's Social Responsibilities (CSR).

The hatchery shall employ workers from the local communities. Providing, minimum wages prescribed in the local and national laws, ensuring worker safety and welfare such as proper living conditions, drinking water, bathrooms, toilets, working hours etc. should ensured as far as possible.

(UNDER DEVELOPMENT)**Key Shrimp hatchery standards and procedure for auditing and ensuring compliance**

Standard	Operationalization / Execution	What to inspect	Compliance level requirement
Comply with applicable national and local laws	<ul style="list-style-type: none"> i) Maintain documents in support of the compliance to applicable national and local laws ii) Maintain documents in support of ownership rights 	<p>CAA License or Enrollment Card or Registration with the State Government</p> <p>Title deeds/lease deeds</p>	Major
Hatchery operations shall be carried out in an ecologically and environmentally responsible manner	<ul style="list-style-type: none"> i) Hatcheries shall not be located in the legally prohibited areas such as mangrove areas and other wet land areas. ii) Hatchery operations shall be carried out in conformity with any form of Good Management Practices/Better Management Practices/Best Management Practices and the hatchery shall possess a written down Standard Operating Procedure developed thereon. iii) Hatchery effluent should match the standards of CAA 	<p>CAA/Local authority approval</p> <p>Hatchery SOP Manual and Hatchery operation records. Check records to see whether the manual is actually followed for day to day operations</p> <p>Check records and match with the CAA standards</p>	Major
Responsible use of chemicals and production of residue free shrimp seeds	<ul style="list-style-type: none"> i) Use only CAA Registered/approved products ii) Suppliers declaration for the absence of antibiotics in the products iii) Keep test reports of products if any in support of absence of antibiotics iv) Hatchery technical personnel should be aware 	SOP & records	<p>Major</p> <p>Recommendation</p> <p>Major</p> <p>Recommendation</p>

	of the ingredients of the inputs and the harmful effects of the pharmacologically active substances		ation
Biosecurity	<ul style="list-style-type: none"> i) Display a copy of the SOP detailing the biosecurity protocols ii) Display biosecurity instructions for the benefit of workers in each section iii) Keep records of training conducted for workers on biosecurity protocols iv) Keep records of health status of brood stocks and live organisms brought in 	<p>SOP</p> <p>Display boards</p> <p>Hatchery records</p> <p>Hatchery records</p>	<p>Major</p> <p>Advisory</p> <p>Major</p> <p>Minor</p>
Record keeping and traceability	<p>1) Records of each production unit should be kept separately indicating</p> <ul style="list-style-type: none"> i. Name or identity (identification number if any) of the unit. ii. Capacity of the unit iii. Stocking date, number of nauplii/larvae stocked and its source iv. Details of feed used in each stage of the hatchery operation for each production cycle v. Product Name, batch number, lot number and manufacturer name and quantity of each input used in the hatchery production cycle,. <p>2) Sales record with date, time, quantity, details of purchaser and mode of transport.</p> <p>3) Water quality testing, disease diagnostic tests and tests for screening antibiotic and other pharmacologically active substance are highly desirable. Name of the laboratories and the results thereof also may be included in the records</p> <p>4) The hatchery shall keep</p>	Hatchery records	<p>Minor</p> <p>Major</p> <p>Major</p> <p>Major</p>

	<p>records of any customer complaints related to the seed supplied. They shall also keep records of the investigations carried out on the complaints and action taken to address/mitigate the grievances/complaints</p> <p>5) Hatcheries shall retain the records of Effluent management and maintain discharge parameters as per CAA standard (Pl. see appendix1)</p>		Major
Community relations and Social responsibility	<p>i) Hatchery shall not obstruct access to fishing and other public facilities.</p> <p>ii) Hatcheries employ workers from local communities as far as possible</p> <p>iii) Employee rights shall be protected</p> <p>iv) Workers shall be paid wages and privileges as per existing laws</p> <p>v) Hatchery management should interact with the local public to promote good relationships</p>	<p>Visual inspection</p> <p>Check employee records</p> <p>Interview employees</p> <p>Employment records</p> <p>Check for any documentary evidence</p>	<p>Major</p> <p>Recommendation</p> <p>Recommendation</p> <p>Recommendation</p> <p>Recommendation</p>

Note:

Guidance on judging requirements:

- i) Major: shall be complied, if not certification will be denied.
- ii) Minor: Hatchery will have to make efforts to comply with, at least to some extent in due course of time.
- iii) Recommendation: If not complied will not disqualify the hatchery from getting certification. But successive audits will have to follow up for any improvement in compliance

Certification of Hatcheries for production of antibiotic free shrimp seed

Procedure :

Application:

Individual units desirous of availing certification under the scheme should apply in the prescribed format (Appendix 1), along with the required documents, with the concerned field office (FO). If the application is complete in all respects and the unit meets the eligibility conditions the unit is registered/enrolled for certification.

Eligibility conditions:

The certification scheme is open to all hatcheries engaged in seed production of export oriented species. Initially the scheme will be applicable only to shrimp hatcheries. Any hatchery engaged in production and supply of shrimp seeds and desirous of availing the benefit of certification is eligible to apply. Hatcheries having basic infrastructure facilities and willing to operate their hatcheries with a clear intention of producing healthy and residue free shrimp seed and paid the required fee are eligible for registration/enrollment for certification. They should be willing to undergo audit by the designated auditors and agree to be part of the surveillance program for shrimp seed quality. Hatcheries, qualifying the audit and participating in the surveillance program will be graded as per the provisions of the scheme and according to the scores they get under the surveillance program.

Registration/enrollment of units:

Hatcheries applied for certification and meeting the eligibility conditions will be listed in a record of registration/enrollment for certification. This record will have the name, address, contact details etc of the applicant as well as the particulars of the hatchery. The record will be updated with new applicants as well as cancellations on rejection of certification as per the provisions of the scheme. Each FO will have the details of the hatcheries registered for certification from their respective jurisdiction. The Certification Cell (CC), at Head Office will maintain a consolidated register of all hatcheries registered/enrolled for certification.

The list of hatcheries applied for certification, certified hatcheries and its status in certification will be displayed in MPEDA website. MPEDA will also conduct publicity to promote certified hatcheries.

Procedure for consideration of application:

On registration/enrollment for certification, concerned CC deputed the designated official /auditor for conducting a preliminary audit (pre-qualification audit) of the unit,

in terms of the infrastructure facilities and the status of SOPs being adopted by the unit.

The auditor recommends modifications in SOPs, if any, required, essentially to comply with certification requirements.

Auditor indicates non-compliances (NCs), if any on adoption of certification guidelines as well as on the infrastructure vis-à-vis the certification standards. The units are advised on rectification of NCs within a stipulated time frame of say 3 months

The units shall rectify the NCs within the stipulated time frame. In case they are unable to do so, they may apply for extension of time frame with due justification for the same.

On rectification of NCs the unit intimates to concerned field office about the same. On receipt of the information, the second audit is arranged for verification of the compliance. This audit will be conducted by an audit committee. They will check the records of hatchery operations of the unit as well as take samples of brood stock/larvae/hatchery water/inputs etc., as they deem fit for further analyses.

If all the records are in order and the results of the samples tested conform to the standards and the results are negative for the antibiotics tested, the hatchery will be cleared for the issue of Certificate for production and supply of antibiotic free seeds. If there are any shortcomings in the hatchery records and the adoption of SOPs the hatchery will be issued an NC report for taking corrective actions wherever necessary. On taking necessary corrective actions for clearing the NCs the units will inform the concerned field office, which will initiate the process for a third audit and verification of the veracity of corrective actions. This will be done by a designated auditor. His duty will be to confirm when the corrective action has been taken by the hatchery satisfactorily. On confirmation of the same, the unit will be recommended for issue of the Certificate for production and supply of antibiotic free seeds. On recommendation for issue of certificate, the hatchery will be under surveillance program in which random surveillance visits will be made by the designated auditor to collect samples to test for antibiotics

Three levels of Audit

There will be three levels of audit. First there will be a pre-certification/pre-qualification audit, wherein which designated auditors will visit the hatchery and

assess the readiness of the hatchery for the Certification audit to be conducted by the designated Audit Committee. The Second level audit will be the Certification Audit conducted by the Audit Committee. The Audit Committee visits the hatchery, checks the records as well as takes samples of brood stock/ larvae/Post larvae, hatchery water / inputs or all these as the committee deem fit in accordance with the guidelines. The samples are given to designated laboratories for analyses for pathogens/antibiotics/water quality parameters as per the recommendations of the committee. On qualifying the certification audit, the hatchery will under surveillance audit for a period of three production cycles (six months). During the surveillance audit the designated surveillance team will conduct random surveillance visit to the hatcheries, check record maintenance and take samples for testing of antibiotics. The samples will be analyzed in designated laboratories. The minimum qualification for certification shall be that the results of the analysis samples for antibiotics will have to be negative. Based on the scores obtained for the records maintenance and the results of the sample analysis the hatcheries will be accorded Grades "A", "B" or "C" as per the guidelines for surveillance.

Empanelment of Auditors:

Individuals/firms desirous of getting empanelled as auditors under the MPEDA Certification scheme for hatcheries may apply in the prescribed format (Appendix 2), their qualification, experience etc. Applications thus received will be scrutinized by a designated committee for selection of Auditors. They committee may call for any additional information as may be required for establishing the credentials of the applicant for the job they have applied for. The committee may also conduct a written test or interview before selecting the applicant for empanelment.

The candidates selected and empanelled will have to execute an agreement with MPEDA with regard to the terms and conditions of their empanelment. Their services can be sought by MPEDA as per the needs.

The auditors will have to follow the guidelines issued for the purpose of auditing. The auditors will be trained on the scheme details and as well as the methodology to be followed in auditing.

Issuing authority:

The issuing authority for the Certificate for Hatcheries antibiotic free seed production of hatcheries is Director, MPEDA or any other officer authorised by Chairman, MPEDA.

Format of the Certificate:

(To be decided)

Terms and conditions of the Certification:

The scheme for certification of hatcheries for production and supply of antibiotic free seed production is purely a voluntary one.

Any hatchery engaged in production and supply of shrimp seeds and desirous of availing the benefit of certification is eligible to apply.

Hatcheries having basic infrastructure facilities and willing to operate their hatcheries with a clear intention of producing healthy and residue free shrimp seed can avail the benefit of certification under the scheme subject to fulfilling the conditions.

The application for certification will have to be accompanied with an application fee. Hatcheries which have applied in the prescribed format and paid the required fee are eligible for registration/enrollment for certification.

The hatcheries should be willing to undergo audit by the designated auditors and agree to be part of the surveillance program for shrimp seed quality.

Hatcheries, qualifying the three levels audit and found to meet the required criteria will be issued a certificate for production of quality, antibiotic free shrimp seed. A list of certified hatcheries will be published in the MPEDA web site. Based on the performance of the hatcheries, as assessed in the hatchery surveillance program the hatcheries will be graded under three categories, viz, Grade "A", Grade "B" and Grade "C" hatcheries as per the grading criteria of the surveillance program. The certified Hatcheries will continue to be covered under the hatchery surveillance program and the surveillance team will carry out random surveillance of the hatcheries. The grades accorded are subject to change on the basis of changes in performance of the hatcheries as assessed during the subsequent surveillance results.

The Certificate is valid for a period of two years. On expiry of the hatchery will have to apply for renewal of the certificate by paying a prescribed fee.

The certificate of hatcheries consistently maintaining Grade "A" for the last two surveillance visits will be renewed without any further surveillance visit. However, if any quality complaint is received from farmers or NRCP samples collected by MPEDA tests deviated from the surveillance reports based on which the hatchery was graded, the hatchery can be subjected to surveillance again. In the case of Grade "B" and "C" hatcheries, the renewal will be accorded on the basis of a surveillance visit.

Certified Hatcheries which are tested positive for antibiotics at any point of time will be suspended and issued a show cause notice as to why the certificate should not be cancelled. The show cause notice would be issued by the officer in charge of the concerned MPEDA field office. The suspended hatchery will be immediately put on emergency surveillance and an investigation will be carried by the designated

auditor within a period of 7 days.. The hatchery will be given 21 days to respond to the show cause notice. . The suspension of the certificate will be continued till a decision is made on the basis of report of the investigation and the response of the hatchery to showcause notice. After going through the investigation report and the response of the hatchery and a personal hearing with the hatchery operator, the officer in charge of the field office will make a decision and convey it to the hatchery. The hatchery could appeal to the appellate committee the decision of the officer in charge within a period of 30 days. The appellate committee will consider the investigation report, response of the hatchery to the show cause notice, the surveillance audit reports and any relevant documents and if necessary conduct a personal hearing before making the decision on the appeal. The hatchery will be eligible to apply for certification on completion of one year from the date of cancellation of the certificate. .

Guidelines for hatchery surveillance:

Hatchery surveillance will be carried out by members of the surveillance team constituted by the competent authority. The surveillance of a hatchery can be carried out by an individual member or two or more members of the surveillance team as deemed fit.

Surveillance will involve the following activities:

The grading can be based on the following 4 criteria:

- Results of the samples taken and analyzed as part of the surveillance
- For General Record Maintenance
- For Seed Quality testing records
- Customer complaint and redressal records

As the disease problems and the antibiotics are the main factors importance is given for these aspects in the evaluation. The remaining three aspects are evaluated on a scale of 1-10 each for arriving at the final scores and the grades. The evaluation scheme detail for the four criteria are given below:

1. Results of the samples taken and analysed as part of the surveillance

A: Antibiotics

- i.Negative for all Banned Antibiotics - 30 Marks
- ii.Negative for all other antibiotics - 20 marks

B: Diseases/Pathogens

- i.Negative for OIE Pathogens - 10 Marks
- ii.Negative for Non-OIE pathogens - 10 Marks

2. For General Record Maintenance evaluation in a Scale of 1-10
3. For Seed Quality testing records evaluation in a Scale of 1-10
4. Customer complaint and redressal records evaluation in a Scale of 1-10

Hatchery getting an overall score of 80 % or above will be graded as "A" Grade; Hatcheries getting a score of 60-<80 % will be graded as "B" grade and those getting score of less than 60 % will be accorded "C" grade. The surveillance team will be provided with a ready-reckoner for according marks for each activity.

During the first three months after the hatcheries get certified, the surveillance visit will be carried out on a monthly basis. Subsequently, the surveillance visit will be carried out once in three months.

Grades accorded to hatcheries will change according to the performance scores obtained by the hatcheries in the successive surveillance findings.

Grievance redressal:

If any hatchery is having any grievance about the grade accorded to them they may approach the officer in charge of the MPEDA field office with a written request or email. The officer in charge of the MPEDA field office may review the records, arrange another surveillance visit through the certification cell at MPEDA HO and make a decision within 30 days. If the hatchery is not satisfied with the decision of the officer in charge, they may appeal to the appellate body for grievance redressal. They need to support their grievance with evidences in support of their claim for higher grade. The appellate body after examining the evidences may revise or rule to retain the status quo of the grades.

Surveillance team:

Hatchery surveillance will be carried out by members of the designated surveillance team constituted under the provisions of the scheme. The surveillance can be carried out individually or jointly by two or more members of the team as required. Members of the surveillance team can be added or deleted by specific orders of the competent authority.

Appellate body:

Appellate body is three member committee of experts constituted under the scheme. The body will have the following members.

1. A senior scientist from CIBA/CIFT/State Fisheries Dept.
2. Office bearer of AISHA
3. A senior officer of MPEDA, not below the rank of Joint Director

Validity of the Certificate:

The validity of the certificate will be for two years.

NB: A certification flow chart is given as appendix 3 for easy understanding

**THE MARINE PRODUCTS EXPORT DEVELOPMENT AUTHORITY
(Ministry of Commerce & Industry, Government of India)**

REGIONAL /SUB REGIONAL CENTRE (AQUACULTURE),.....
**APPLICATION FOR CERTIFICATION OF HATCHERIES FOR PRODUCTION AND
SUPPLY OF ANTIBIOTIC FREE SEEDS**

Sl. No.	PARTICULARS	
1	Name of the Applicant (s) in capital letters	
2	Address of the applicant (in capital letters) with contact phone number, email etc.	
3	Location address with Survey Number, Village, Taluk, District, State etc.	
4	Hatchery Details (Capacity; Species reared; whether includes brood stock development and spawning section or rear from nauplii to PL/fry to fingerling etc)	
5	Enrolment No. from MPEDA (if already enrolled).	
6	Nature of the legal entity* (Individual/Society/Trust/Company with details) *If other than individual please furnish proof of authorized signatory	
7	Whether the hatchery has formulated a standard operating procedure (SoP) for seed production and can be produced for examination for audit by the auditors	
8	If not, please state the date by which the SoP will be ready for audit	
9	Whether the hatchery is under any Third Party Certification scheme. If so, please give the details	
10	Application fee Rs /- though online payment. (Name of Bank and Date of remittance)	

I / We hereby certify that the particulars given in the application and papers appended thereto are true to the best of my /our knowledge and belief.

I/We do hereby undertake to provide whatever additional particulars may be called for by the MPEDA in connection with the application.

Copies of all the documents as per the check list enclosed along with this application.

Signature:

Date:

Name:

Place:

Designation:

Seal:

Foot Note:

List of documents to be submitted along with the application

1. Proof of ownership (Copy of the patta or lease deed)
2. Copy of Aadhar Card
3. Copy of the SOP being adopted by the hatchery.
4. Details of infrastructure facilities available at the hatchery and a lay out of the hatchery.

**THE MARINE PRODUCTS EXPORT DEVELOPMENT AUTHORITY
(Ministry of Commerce & Industry, Government of India)**

**APPLICATION FOR EMPANELMENT AS AUDITOR FOR CERTIFICATION OF
HATCHERIES FOR PRODUCTION AND SUPPLY OF ANTIBIOTIC FREE SEEDS**

<u>Sl. No.</u>	PARTICULARS	
1	Name of the Applicant (s) in capital letters	
2	Address of the applicant (in capital letters) with contact phone number, email etc.	
3	Educational Qualifications (Pl. Attach proof)	
4	Experience in the field of aquaculture if any (please attach proof)	
5	Experience in the field of certification as auditor if any (please attach proof)	
6	Nature of the legal entity* (Individual/Society/Trust/Company with details) *If other than individual please furnish proof of authorized signatory and also provide a list of persons and their educational qualification and experience	

I / We hereby certify that the particulars given in the application and papers appended thereto are true to the best of my /our knowledge and belief.

I/We do hereby undertake to provide whatever additional particulars may be called for by the MPEDA in connection with the application.

Signature:

Date:

Name:

Place:

Designation:

CERTIFICATION PROCESS FLOW CHART

- Hatchery apply in the prescribed format along with the required documents and fee to the concerned Field Office (FO) of MPEDA
- The field office after due verification, records the details of the hatcheries applied for the certification in a register and forwards the application to the Certification Cell (CC) at MPEDA, HO with a recommendation to register/enroll for certification of the hatchery.
- The Certification Cell accepts the application and registers/enrolls the unit and assigns a registration/enrollment number to the unit. The same is intimated to the hatchery and the concerned field office.
- Mere submission of application will not make the hatchery entitled for receipt of certificate for production and supply of antibiotic free seeds. The hatchery will have to pass through three levels of audit and qualify for the issue of certificate.
- The details of the hatchery will be published in the MPEDA website and status of the hatchery in its progress to certification through various stages will be indicated in the website.

Preliminary Audit

- The CC assigns auditor from among the empanelled auditors to carry out the preliminary (pre-qualification) audit of the unit.
- The Auditor visits the hatchery and carries out the audit as per the guidelines – records and conveys Non Conformities (NCs), if any, to the hatchery. If everything is as per the standards recommends the case for Certification audit
- The unit will have to carry out necessary rectifications to clear the NCs within the stipulated period of 3 months. The hatchery may avail the assistance of the field office of MPEDA for clearing the NCs. The unit may apply for extension of time if necessary with proper justification.
- On rectification of the NCs, the unit intimates the same to the FO with intimation to the CC.

Certification Audit

- The CC assigns the Audit Committee for carrying out the Certification Audit of the unit
- The Audit Committee visits the hatchery, checks the records as well as takes samples of brood stock/larvae/hatchery water/inputs etc., as they deem fit in accordance with the guidelines for analysis. The samples are sent to designated laboratories for analysis

- If all the records are in order, conform to the standards and results of the analyses are negative for antibiotics the hatchery will be cleared for issue of Certificate for production and supply of antibiotic free seeds.
- If there are any shortcomings in the hatchery records and the adoption SOPs the hatchery will be issued an NC report for taking necessary corrective actions.
- After taking necessary corrective actions, the unit will intimate the same to the FO & CC and the CC will arrange for an audit to verify the veracity of the corrective actions taken. This audit will be done by a designated auditor from the panel.
- On receipt of confirmation report of the auditor, the hatchery will be placed under the status "Under Surveillance". (no need to issue a certificate at this stage. We will limit to 1 certificate)

Surveillance Audit

- The CC assigns a Surveillance auditor/ team for carrying out the Surveillance of the hatchery.
- The Surveillance team will conduct random surveillance visit to the hatchery and collect samples for testing antibiotics.
- The samples will be tested in designated laboratories.
- Only those hatcheries, the samples from which tested negative for the banned and other antibiotics only will qualify for issue of certificate for production of antibiotic free seed.
- On the basis of overall scores obtained in the surveillance program, the hatchery will be accorded grades A, B or C per the guidelines of the surveillance and evaluation of the hatchery operations.
- The Hatchery will be issued a certificate for production and supply of antibiotic free seeds by the FO.
- The Certified Hatcheries will be subject to unforeseen, random surveillance to ensure that the hatcheries are producing seeds as per the standards. The grades accorded are subject to change on the basis of changes in performance of the hatcheries as assessed during the subsequent surveillance results.
- Surveillance frequency for hatcheries under the grade C will be 6/year, Grade B will be 4/year and Grade A will be 2/year.

Publicizing details of hatcheries

- From the moment the hatchery is registered/enrolled for certification, the name of the hatchery will feature in a list of hatcheries published in MPEDA website. The list will also display the status of hatchery in the certification process.
- A separate list of hatcheries which are certified after completion of the due process and qualifying as per the provisions of the scheme, with grade

accorded to the hatchery will also be published. The changes in the grades will also be published as and when the surveillance team reports the grades obtained in random surveillance from time to time.

Validity of Certificate:

- The Certificate issued is valid for a period of two years. Three months before the expiry of the validity, the hatchery will need to apply for renewal of certification.

Procedure for renewal of Certification:

- The hatcheries will have to apply to the concerned field office in writing for renewal of certification.
- On receipt of the request, the field office will check the credential of the hatchery and recommend the case to CC.
- The Certification of hatcheries consistently maintaining the “A” for last two surveillance visits will be renewed without any further surveillance visit.
- However, if any quality complaint is received from farmers or NRCP samples collected by MPEDA showed positive for any positive result, the hatchery can be subjected to surveillance again before issue of renewal of certification to the hatchery.
- In case of hatcheries in “B” and “C” grade status, the renewal can be accorded only on the basis of surveillance audit.

Rejection or Cancellation of Certification:

- Applications of Hatcheries which do not conform to the standards or failing to produce antibiotic free seeds will be rejected. When such applications are rejected, the reasons for rejection will be cited in the rejection letter.
- If a certified hatchery is tested positive for antibiotics at any point of time the certificate issued to the hatchery will be suspended with immediate effect and the hatchery will be issued a show cause notice as to why the certificate issued should not be cancelled. The hatchery will be given 21 days to respond to the show cause notice.
- The hatchery will be immediately subjected to an emergency surveillance and an investigation will be carried out by a designated auditor within a period of 7 days.
- The suspension of the certificate will continue till a decision is made based on the report of the investigation and the response of the hatchery to the show cause notice. If necessary the officer in charge of the FO will give a personal hearing to the hatchery operator before taking a decision on the hatchery.
- If the hatchery is aggrieved at the decision of the officer in charge of the FO, can appeal to the appellate authority
- The appellate authority will consider the investigation report, response of the hatchery to the show cause notice, the surveillance audit reports and any

other relevant documents and if necessary, conduct a personal hearing before making a decision on the appeal. Decision of the appellate authority will be final.

- The hatchery can apply for certification, afresh on completion of one year from the date of cancellation of the certificate.

Grievance redressal:

- If any hatchery is having any grievance about the grade accorded to them they may approach the officer in charge of the MPEDA field office with a written request or email. The officer in charge of the MPEDA field office may review the records and if necessary recommend another surveillance visit through the certification cell at HO and make a decision within 30 days.
- If the hatchery is not satisfied with the decision of the officer-in-charge of the field office, they may appeal to the appellate authority with evidences in support of their claim for higher grade. The appellate body after examining the evidences may revise the grade or recommend a status quo of the grades.