GOVERNMENT OF INDIA
MINISTRY OF FISHERIES, ANIMAL HUSBANDRY & DAIRYING,
DEPARTMENT OF FISHERIES

EOI No. DOF/EOI/NBC/01 **Dt. XX.06.2025**

Expression of Interest

For

"Establishing Nucleus Breeding Centres (NBC) In India"

September, 2025

Place: New Delhi **Date: XX.04.2025**

Department of Fisheries
Ministry of Fisheries, Animal Husbandry & Dairying
Government of India
Krishi Bhawan, Dr Rajendra Prasad Road, Central Secretariat, New Delhi-110001

INVITATION FOR EXPRESSION OF INTEREST

Department of Fisheries, Ministry of Fisheries and Animal Husbandry & Dairying, Government of India invites sealed Proposals from interested and experienced firms/companies/organizations involved in domestication and breeding programmes of any potential candidate species for coastal aquaculture to produce Specific Pathogen-Free (SPF) Brood Stocks of *L. vannamei*, either independently or through a Joint Venture with the local partner from India. EOI document containing the details of criteria, submission requirement, objective, scope of work etc. can be downloaded from the website http://dof.gov.in.

Further details/queries, if any, may be obtained from **Fisheries Development Commissioner,** Department of Fisheries, Ministry of Fisheries and Animal Husbandry & Dairying, Government of India Krishi Bhawan, Dr Rajendra Prasad Road, Central Secretariat, New Delhi-110001. Telephone No.91-23386379/E-mail: fdc-india@dof.gov.in during working hours.

This is a rolling EOI. Sealed envelope marked to the below address, containing the proposal with all relevant documents may be submitted mentioning "Expression of Interest for establishing Nucleus Breeding Centres (NBC) for *L. vannamei* in India on the top of the envelope.

The Joint Secretary (Marine Fisheries)
Department of Fisheries
Ministry of Fisheries and Animal Husbandry & Dairying
Government of India
Krishi Bhawan, Dr Rajendra Prasad Rd, Central Secretariat, New Delhi-110001

Fisheries Development Commissioner
Department of Fisheries,
Ministry of Fisheries and Animal Husbandry & Dairying, Government of India,
Krishi Bhawan, Dr Rajendra Prasad Rd, Central Secretariat, New Delhi-110001

1. Objective

The Government of India aims to promote establishment of Nucleus Breeding Centres (NBCs) for development of genetically superior and disease-free broodstock for fish and shrimp species including *L. vannamei* in the country. This initiative is crucial for enhancing aquaculture production, ensuring sustainability, and supporting seafood exports and in line with ATMA NIRBHAR BHARAT. The program will encourage private sector participation to set up domestication and breeding programs to produce Specific Pathogen-Free (SPF) broodstock especially *L. Vannamei*. This effort aligns with the broader vision of improving India's self-sufficiency in aquaculture and reducing dependence on foreign imports.

2. Background and Rationale

2.1 India's seafood exports have been growing at an average rate of 15% annually, reaching an all-time high of USD 7.38 billion in 2023-24, a nearly 30% increase from 2020-21, with brackish water shrimp as the leading commodity. The country has an estimated 12.40 lakh hectares of potential brackish water for aquaculture, but only 15% is currently utilized, demonstrating significant untapped potential.

2.2 The demand for *L. vannamei* broodstock from the commercial hatcheries in India is currently estimated at 250,000 broodstock per annum. India's commercial hatcheries currently depend on imported broodstock, quarantined at the Aquatic Quarantine Facility (AQF) in Chennai, leading to higher costs and supply chain vulnerabilities. Three Broodstock Multiplication Centres (BMCs) are operational in India to supply *L. vannamei* shrimp broodstock, but domestic capacity needs further development. Ensuring biosecurity and disease-free broodstock is critical to maintaining a sustainable and profitable aquaculture industry.

2.3 In pursuance of Section 3 of the Coastal Aquaculture Authority Act, 2005 (24 of 2005), Guidelines for establishment and operation of Nucleus Breeding Centre and Broodstock Multiplication Centres in India has been notified in Gazette vide 15th March, 2024 of India by Department of Fisheries, Government of India

2.4 In the Union Budget 2024-25 Hon'ble Finance Minister announced financial support for setting up a network of Nucleus Breeding Centres. The proposed NBCs will focus on improving broodstock quality for key species, including *Litopenaeus vannamei*

3. Scope of Work & Project Goals

The establishment of NBCs will involve

3.1 Development of Genetically Superior Stocks: Creation of Specific Pathogen-Free (SPF). broodstock.

3.2 Selective Breeding Programs: Implementation of advanced genetic selection techniques to improve disease resistance, reproductive performance, and growth rates of broodstock

3.3 Private Sector Participation: Domestic and international firms with expertise in breeding programs are encouraged to participate independently or via joint ventures with Indian partners.

4. Eligibility Criteria: The CAA amendment rules provides for the followings:

(i) The Nucleus Breeding Centres and Broodstock Multiplication Centres shall be established for increasing production and productivity of the coastal aquaculture sector in India by any

existing producers of specific pathogen free broodstock as well those involved in domestication and breeding programmes of any potential candidate species for coastal aquaculture either from India or from overseas either independently or through a joint venture with the local partner from the India.

(ii) An applicant organization possesses in the requisite experience and capabilities required for establishment and operation of Nucleus Breeding Centres or Broodstock Multiplication Centres may apply in Form-F-1 either individually (as sole organisation) or as lead partner of a consortium of organisations (as lead partner) as per the extant rules, regulations and procedure in force.

(3) The Applicants shall individually or collectively possess the following technical capacity and experience, namely:-

(i) have successfully designed and operated a Nucleus Breeding Centres or Broodstock Multiplication Centres for *Litopenaeus vannamei* or any such other fish or shrimp species which has developed and maintained a minimum of 5 generations; and

(ii) have successfully developed and managed a minimum of 50 families of *Litopenaeus vannamei* or any such other fish or shrimp species, through its own research and development activities, in the last ten years.

(4) The applicants must have been engaged in the establishment and operation of at least one Nucleus Breeding Centres or Broodstock Multiplication Centres assignment within the last five years preceding the date of application and submit details thereof.

(5) The Genetic Improvement Programs and Nucleus Breeding Centre under the Government shall be encouraged through Indian Council of Agricultural Research under the Department of Agricultural Research and Education on a convergence mode with the other Ministries and Department of Government of India including organization and other entities under them, the State or union territory Governments and private entrepreneurs,

5. Prior permission for establishing Nucleus Breeding Centres or Broodstock Multiplication Centres.-

5.1. The prior permission for establishing the Nucleus Breeding Centres or Broodstock Multiplication Centresupon an application made under rule 11 of the said rules of CAA shall be granted by the Central Government in the Department of Fisheries, Ministry of Fisheries Animal Husbandry and Dairying, based on the recommendations of the following Project Screening Committee:

(i)	Joint Secretary (Marine Fisheries), Department of Fisheries	:	Chairperson/Chairman
(ii)	Secretary, Coastal Aquaculture Authority	:	Member
(iii)	Director, ICAR-National Bureau of Fish Genetic Resources	:	Member
(iv)	Director, Indian Council of Agricultural Research-Central Institute of Brakishwater Aquaculture	:	Member
(v)	Director, Indian Council of Agricultural Research - Central Marine Fisheries Research Institute	:	Member
(vi)	Representative from Department of Economic Affairs or Corporate Affairs	:	Member
(vii)	Project Director, Marine Product Export Development Authority - Rajiv Gandhi Centre for Aquaculture	:	Member

5.2 The application under rule, 11 of CAA amendment rules shall contain but not limited to the following, namely:

(i) general hackground and overview of the individual firm or consortium,
(ii) statement of qualification;
(iii) understanding of the assignment and scope;
(iv) work methodology:
(v) detailed mile stones;
(vi) domestic and international experience in design and operation of a Nucleus Breeding Centre or a breeding programme (if any);
(vii) professional and local partners (if any);
(viii) technical team strength,
(ix) details of technology
(x) valid certificates of freedom from disease from the competent authority of the Government issued in accordance with the World Organization for Animal Health Code, for the facilities operated by the applicants.

5.3. The Project Screening Committee shall be assisted by a Technical and Inspection Committee to be constituted by an order of the Central Government.

5.4. The Project Screening Committee shall scrutinize the applications received from time to time and subject project site for physical verification and on-site inspection by the Technical and Inspection Committee

5.5. The Technical and Inspection Committee shall conduct a physical verification and on-site inspection and submit its report on the suitability of the site proposed for establishment of Nucleus Breeding Centres or Broodstock Multiplication Centres before the concept presentation by the applicant.

5.6. The Project Screening Committee shall scrutinize the applications received from time to time and evaluate them through a concept presentation made by the applicant on the scheme of development covering the following aspects, namely:

(i) brief background of the applicants and the details of Nucleus Breeding Centres or Broodstock Multiplication Centres being operated by the applicants, as well as experience, if any, of having provided services in any other project;

(ii) conceptual plans of the project including preliminary lay out and site plan, floor plans, elevations, sections wherever necessary:

(iii) indicative area allocation for the different zones of the Nucleus Breeding Centres or Broodstock Multiplication Centres,

(iv) expected features and functionalities of the proposed Nucleus Breeding Centres or Broodstock Multiplication Centres;

(v) preliminary cost estimates for the development of project;

(vi) proposed selective breeding strategy that the applicant seeks to implement including physical growth, freedom from disease with disease tolerance characteristics and reproductive performance,

(vii) analysis of the historical outcomes of the research & development undertaken by the applicants;

(viii) presentation of the Standard Operating Procedure and manuals to be prepared for the project by the applicants and the procedure to be adopted for developing distinct families with least inbreeding

(ix) advantages of the technology and hio-security being provided by the applicants and the rationale and benefits of such an approach.

5.7. The Project Screening Committee shall make its recommendation based on the report of the Technical and Inspection Committee and the concept presentation to the Department of Fisheries for grant of prior permission or otherwise by the competent authority to establish Nucleus Breeding Centres or Broodstock Multiplication Centres.

5.8. The decision of the competent authority shall be conveyed to the applicant within ninety days from the date of receipt of application.

6. General requirements:- (i) There shall be no aquaculture activities or Fish Landing Centres or any other source of direct contamination within a radius of 1000 meters (one kilometer) from the site selected for the establishment of the Nucleus Breeding Centres or the Broodstock Multiplication Centres

(ii) The Nucleus Breeding Centres and Broodstock Multiplication Centres shall be in separate locations and in case there is substantial cause, they may coexist within the same site with adequate physical separation and isolation from each other with independent water supply and discharge

(iii) There shall be adequate biosecurity measures to analyze and manage risks in the life and health of candidate species including associated environmental risk for the prevention of diseases in aquaculture.

(iv) The Nucleus Breeding Centres and Broodstock Multiplication Centres shall comply with the requirements for biosecurity, in-house biosecurity audit, in house health monitoring and disease surveillance and chain of custody sampling and testing as specified in the Guidelines for the Health Monitoring, Disease Surveillance and Specific Pathogen Free Certification of Coastal Aquaculture Units and Stocks in India and Aquatic Animal Health Code of World Organisation for Animal Health.

7. Application Submission & Evaluation Process

7.1 Applications can be submitted individually or as Lead partner. The proposal must include company background, qualifications, methodology, technology details, and disease-free certification.

7.2 Shortlisted proponents must provide a 60 - minute presentation covering:
Background and experience
Presence in India and seed supply chain
Available Germplasm, its origin and performance indicators
Conceptual plans, layout, and site selection
Selective breeding strategies and expected outcomes
Biosecurity measures and technological advantages
Projected economic benefits and scalability potential
Training and skill development plans for NBC/ hatchery staff

7.3 The Project Screening Committee (PSC) constituted for this purpose will evaluate and recommend the potential applicants.

8. Support from Government of India:

8.1 The Government of India will provide support as follows:

(i) **Pradhan Mantri Matsya Sampada Yojana (PMMSY)**

The Pradhan Mantri Matsya Sampada Yojana (PMMSY) has been implemented as an umbrella scheme provides for funding support for NBC under the sub component of Genetic Improvement Programmes and Nucleus Breeding Centers (NBCs):

(ii) **Fisheries and Aquaculture Infrastructure Development Fund (FIDF)**

(a) **Interest Subvention**: Up to 3% per annum for all EEs for development of identified fisheries-based infrastructure facilities including establishment of Nucleus Breeding Centres (NBCs) for development of genetically superior and disease-free broodstock for fish and shrimp species.

(b) **Lending Rate of Interest**: Not lower than 5% per annum for all EEs for development of identified fisheries based infrastructure facilities.

(c) **Repayment period:** 12 years with moratorium of 2 years for re-payment of principle amount.

(d) FIDF provides 25% credit guarantee facility to the projects of entrepreneurs, individual farmers and cooperatives to be approved under FIDF during the extended period of 3 years from 2023-24 to 2025-26 from the existing credit guarantee fund of Infrastructure Development Fund of Department of Animal Husbandry and Dairying.

8.2 The Department of Fisheries, Government of India, will also facilitate the allotment of suitable sites for the selected proponents through the State Governments concerned.

8.3 Research & Development Collaboration: The initiative will encourage R&D partnerships between the Government, private sector, and academic institutions. The Support of research institution in India in the field of Fisheries will also be extended on all possible areas of collaboration.

9. Conclusion

This initiative aims to boost India's aquaculture industry by ensuring high-quality, disease-resistant broodstock for shrimp and fish farming. The Government of india seeks participation from experienced firms, research institutions, and aquaculture specialists to establish NBCs and enhance domestic breeding programs. Interested applicants are encouraged to submit proposals as per the guidelines to contribute to India's expanding aquaculture sector and strengthen the country's global seafood market presence. This effort is expected to create a self-reliant, robust, and sustainable aquaculture ecosystem in India.

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Form- F-1

Application for prior permission to establish Nucleus Breeding Centre or Broodstock Multiplication Centre

I.	**Name of the candidate species**	
II.	**Prior permission sought to establish Nucleus Breeding Centre or Broodstock Multiplication Centre**	
III.	**Details of the proposing firm or consortium:**	
1.	Name of the applicant (s) or firm (s) (Separate sheet may be attached for each member in case of consortium)	
2.	Address	
3.	Date of incorporation and registration details	
4.	Field of operation	
5.	Details of Board of Directors and Managing Director with copy of Memorandum of Association or Memorandum of Article	
6.	Certified a Audited financial statement of the firm for the last three years	
IV.	**Statement of qualification**	
1.	Number of years of experience in the operation of Nucleus Breeding Centre or Broodstock Multiplication Centre	
2.	Number of Nucleus Breeding Centre or Broodstock Multiplication Centre designed or operated, candidate species and Number of families developed and maintained in the last ten years (attach separate sheet)	
3.	Number of families developed and maintained through own research and development activities in the last ten years	
V.	**Details of source material:**	
1.	Name of the overseas Specific Pathogen Free Facility	
2	Address (including email ID)	
3.	Details of the firm:	
4.	Country of registration	
5.	Location of the facility	
6.	Terms and conditions of agreement with the Indian firms	
7.	Details of extent of commercial supply of Specific Pathogen Free broodstock	
8.	Details of any other Nucleus Breeding Centre or Broodstock Multiplication Centre operated in anyother country	
9.	Reproductive performance of Specific Pathogen Free broodstock of the firm in terms of Size at maturity, latency period for maturation, fecundity, Number of spawning per female, hatching rate and survival rate at different stages	
10.	Performance of the stock in commercial culture for growth and disease	
11.	Copy of the Memorandum of Understanding or agreement indicating a firm commitment for the supply of source material as per the requirement is to be enclosed.	
VI	**Detailed infrastructure and personnel of overseas Specific Pathogen Free facility**	
1.	Lay-out plan of the Specific Pathogen Free facility (attach diagram with explanation)	
2.	Water treatment and supply	
3.	Rearing facilities	
4.	Laboratory facilities	
5.	Biosecurity (disinfection protocol, shower room, fencing, etc.)	
6.	Number of technical staff and details of their expertise (Attach biodata)	
7.	Financial status for last three years alongwith audited statement	
VII	**Disease surveillance at the Specific Pathogen Free facility**	

1.	List of pathogens excluded in the facility	
2.	Methodology followed for the diagnosis (or diagnostic protocolsfollowed)	
3.	Certificate (issued by Government) of disease free nature of the facility for the last two years to be enclosed	
4.	Frequency of surveillance	
5.	Details of the diagnostic reports during the recent surveillance from a Government authorised or World Organisation for Animal Health referral laboratory	
VIII.	**Details of selective breeding programme**	
1.	Source of Founder population (Number of geographic location or number of Specific Pathogen Free facilities sourced)	
2.	Genetic divergence of the population (Number of families from eachlocation or each Specific Pathogen Free facility.	
3.	Frequency of introduction of further families into founderpopulation	
4.	Type of selection programme followed	
5.	Number of lines and Number of families maintained	
6.	Number of generations raised	
7.	Minimum effective population size over the generations	
8.	Traits considered for selection	
9.	Genetic gain over the generations	
10.	Name and brief bio-data of the geneticist involved in draftingthe breeding plan	
11.	Breeding plan indicating the specific details to avoidinbreeding	
IX	**Details of Indian Broodstock Multiplication Centre facility**	
1.	Annual capacity proposed (Number of broodstock per year)	
2.	Requirements of Specific Pathogen Free Post Larvae and the frequency of import	
3.	Number of months of rearing proposed	
4.	Survival anticipated during rearing from Post Larvae to broodstock	
X.	**Infrastructure facilities proposed**	
1.	Land area	
2.	Location	
3.	Whether any existing facility is being remodeled as Broodstock Multiplication Centre? If so, indicate its prior use and the present condition	
4.	Distance between the nearest hatchery or farm	
5.	Lay-out plan of the posed facility indicating the quarantine, water intake and treatment, rearing tanks under closed conditions, biosecurity features, Effluent Treatment System, etc., indicate the capacity and number of tanks (attach diagram with explanation)	
6.	Details of the diagnostic laboratory facility	
7.	Brief cost estimates and source of funding	
8.	Technical staff proposed to be involved in the operation of Broodstock Multiplication Centre and their brief bio-data indicating their area of expertise	
9.	List of pathogens proposed to be tested in the Broodstock Multiplication Centre and thesurveillance protocol to be followed	
10.	Sampling details	
11.	Frequency of sampling and testing	
XI.	**Any other particulars or details**	

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