

**Application Form**  
**Expression of Interest**  
**For**  
**Operation and Comprehensive**  
**Maintenance**  
**of**  
**Aquatic Rainbow Technology Park**  
**of**  
**Tamil Nadu Fisheries University**





## TAMIL NADU FISHERIES UNIVERSITY

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### ***Invitation for Expression of Interest***

Tamil Nadu Fisheries University (TNFU), Nagapattinam proposes to engage a reputed professional Operation and Maintenance Agency (OMA) for carrying out operation and maintenance of Aquatic Rainbow Technology Park (ARTP) located inside the TNFU Madhavaram campus for the year 2017-18. Expression of interest (EOI) for the purpose is invited from the interested parties. It may be noted that this is invitation for EOI and should not be construed as the Tender/ Request for Proposal (RFP) in any form and would not be binding on the institute in any manner whatsoever.

Sealed EOI prepared in accordance with the procedure enumerated in this document should be submitted to the Dean, Fisheries College and Research Institute (Chennai campus), Ponneri, Thiruvallur District. The EOI must be submitted to the Dean, Fisheries College and Research Institute (Chennai campus), Ponneri, Thiruvallur District by **25<sup>th</sup> January, 2018** latest by **3:00 PM**. The EOI should be valid for 90 days from the date of opening. The OMA, who are submitting the EOI are required to visit the institute on 30<sup>th</sup> January, 2018 at 11:00 AM for a pre-bid meeting to examine the whole systems and to apprise themselves about the nature of business, building facilities, type of equipments and associated infrastructure facilities and satisfy themselves on their capabilities before submitting the offer.

The application should be accompanied with the following information:

- (a) A capability statement (Not more than two pages).
- (b) A write up on the understanding of the assignment. (Not more than 2 pages)
- (c) Company/ Organization profile giving details of current activities and management structure.
- (d) Evidence of incorporation.
- (e) Annual report including balance sheet and profit and loss account statement for the past three years.

## **1. Introduction of ARTP**

TNFU has established ARTP at Madhavaram Milk Colony, Chennai-600051. ARTP is planned in such a way that it will have the state of the art broodstock holding, breeding, nursery rearing, mass culture in raceways, etc. The entire live feed requirement will also be produced in the most bio secured environment. ARTP will also have a separate mega marketing complex planned away from the production units, where it provides Single Window Supply channel for the delivery of quality brood fishes, hi quality seeds, feeds, live feeds, drugs, accessories, etc. for ornamental fish sector of Tamil Nadu and India.

ARTP will ensure in streamlining the industry, provide technical guidelines for the business, research and development, technical support to hatcheries and raceways on breeding technology. This whole initiative will not only create employment opportunities within the structure of the initiative through the need for maintenance workers, naturalist/biologists, guides and service staff, but with the increase in visitors will result in higher demand for ornamental fishes and related services throughout the region.

## **2. Objectives behind the development of ARTP**

- (a) To design & develop hatchery facility to produce Ornamental fish seeds of high quality.
- (b) To domesticate and demonstrate the heterotrophic microbial based nursery protocol for culturing of ornamental fishes using 'aerobic microbial flocculent' technology & 'zero water exchange' phenomenon.
- (c) To design and develop out door raceways intensive grow out system management.
- (d) To inculcate knowledge of innovative culture systems and culture protocols for the farmers and entrepreneurs through 'on - farm demonstrations'.
- (e) To encourage farmers to undertake such hi-tech based farming trails in the Aquatic Rainbow Technology Park (ARTP) campus by extending common facilities at affordable cost viz. water treatment, aeration, used water treatment, technical consultation, etc. through a suitable Governance and Business Model.

## **3. Components of ARTP:**

In line with the aforesaid objectives, ARTP has been developed with the following components:

- i. **Multi species Ornamental Fish Hatchery:** This facility consists of 10 mini hatchery units with all the facilities to breed the ornamental fish. Each unit has 20 FRP and 10 glass tanks of the following dimensions:
  - a) 80 L= 10 nos (glass tank)

b) 600 L = 09 Nos

c) 1000 L = 11 Nos

Filtered water & aeration facilities are available under the roofing.

- ii. **Heterotrophic based Indoor Raceways system:** This facility houses 10 Raceway units. Each unit comprises of two tanks with each tank capacity of 6 x 2 x 1.15 m (13 ton capacity) with air lift pumps operated by blowers which ensure a running water system. Rapid sand filters for each of the raceways units. Blowers & Back-up Generators are essential for the systems.
- iii. **Heterotrophic based Outdoor Raceways system:** This facility houses 8 Raceway units. Each unit comprises of four tanks with each tank capacity of 12 x 2 x 1.15 m (27 ton capacity) with air lift pumps operated by blowers which ensure a running water system. Rapid sand filters for each of the raceways units. Blowers & Back-up Generators are essential for the systems.
- iv. **Live Feed culture section:** Live feed culture facility incorporates a number of small tanks of all sizes to grow Daphnia, Moina and all other such live feed species. Adequate lighting, filtered water and continuous aerators are essential for this system. Size of this building will be 208 m<sup>2</sup>, this will be maintained by TNFU and live feed will be sold by them on unit cost basis to the farmers in and around the facility
- v. **Administrative Building cum Laboratory:** It consists of two floors of 300 m<sup>2</sup> each. The ground floor will have a set of laboratories for the research and development on various aspects. First floor will be the administrative office to control ARTP and training hall. The lab complex comprises the following facilities:
  - (a) Water & soil quality testing lab
  - (b) Aquatic Microbiology lab
  - (c) Molecular PCR lab
  - (d) Pathology lab
- vi. **Water treatment and supply system:** It consists of bore well to supply water, piping system with treatment plant to ensure quality water to all the components. It has an overhead tank for water supply to individual sumps of 5 ton capacity for live feed, indoor raceway, quarantine and hatchery units. It also has 100 ton capacity of sump for outdoor raceway.

- vii. **Transformer yard and generator:** The whole complex is provided with power from the central distribution system. The stand alone facilities which are leased out to the individual will be charged as each independent unit will be fixed with separate metering units. The generator facility will be given to those units which are under direct control of park administration.
- viii. **Toilet block:** A toilet block is built for use by all the people who will use the ARTP facilities.
- ix. **Security cum EB panel block:** EB panel is attached with the security block to ensure safety and security of the project premises

#### **4. Plan of operation of ARTP:**

With Government initiatives as per the project proposed and its objectives, ARTP has been established and it is now ready for operation with a plan to lease the facilities to innovative farmers/technocrats/companies so as to develop the 'aquaculture rural entrepreneurship' in Tamil Nadu in line with the project objectives by

- (a) Encouraging farmers utilize advanced infrastructure facilities for ornamental fish production
- (b) Developing the skill and knowledge of farmers in aquaculture thereby uplifting the socio-economic status of farmers
- (c) Increasing the trade of ornamental fishes in Tamil Nadu by increasing production through innovative technologies

#### **5. Scope of work for OMA:**

- (a) All the facilities of the ARTP have to be maintained by OMA.
- (b) Management of complete water supply and drainage system of the project.
- (c) Management of the electrical system of the project.
- (d) Collection of rent/lease from end users periodically and credit it to ARTP bank account, TNFU.
- (e) Management of the facility through proper control systems like biometrics for the occupants, visitor entry cards and periodical redressal systems avoiding any internal conflicts etc.
- (f) Management of associated infrastructure such as roads, street lights, garden.

- (g) Management of total safety and security of the entire project with the assistance of the security guards, surveillance systems, trained first aid personnel etc.
- (h) Monitoring the payment of electricity consumption charges directly to the Tamil Nadu Electricity Board (TNEB) by the end users of the project.
- (i) Collection of water charges periodically (monthly/quarterly) from the end users.
- (j) Maintenance of social responsibility through adoption of appropriate public relationship with the adjoining community
- (k) Capability of disaster management

**6. Detailed enumeration of the activities under the scope of OMA:**

Water pumps including water treatment plant	<p>OMA will regularly operate treatment plant, fill up the reservoirs and ensure uninterrupted supply of water in the ARTP Complex. Water pumps to be maintained for getting water 24 x 7 basis. Water treatment plant should be maintained properly, so that water quality does not deteriorate.</p> <p>Maintenance of pumps, filtration plant and reservoir including supply (cost reimbursement basis) of consumables i.e. salt, chemical etc., oiling of pumps, if and when necessary, greasing of parts as and when necessary, regular backwash for iron removal etc. are under the scope of OM service provider. This will include periodic cleaning of underground reservoir. Consumable will be reimbursed. Testing of water to be done whenever required.</p>
General Plumbing	<p>Operation and Maintenance of the general plumbing works in various places viz. toilet blocks, toilets in the administrative building / non AC halls/ food court/ underground reservoir / pump house/ OAT, water/drainage/sewerage pipelines etc. O&amp;M of fittings, fixture of toilet blocks.</p>
Drainage and Sewerage	<p>Operation and Maintenance along with consumables. This will include periodic cleaning of underground reservoir, preventive measures for chocking of the system of drainage and sewerage lines.</p>
Electrical Infrastructure	<p>Maintenance of motor, a/c machine, battery, battery charger, street light and various other lights in the general area alone (not inside the lessee's premises); replacement of light/bulb along with the required electrical fittings and consumables as required; switching operation of lighting installation. Competent persons authorized to carry out such activities should be engaged.</p>
Diesel Generator Sets	<p>Generators should be kept ready for operation 24 x 7 basis. For this, all routine and preventive maintenance procedure prescribed in the operational manual to be followed. OMA shall procure diesel and lubricant and get the reimbursement from ARTP lessees as per consumption norms given by the</p>

	manufacturer of DG sets. Handling and operation of DG sets to be done by engaging competent persons only.
Main TNEB Power	Operation and follow-up routine check list. In case of power failure, DG sets to be started and connect load that are required to be operational during power failure. Inform TNEB about power outage and take complaint number. Enquire about the nature of failure and likely time for restoration
500 KV Transformer, LT Distribution Board, Control Panel, Power/Lighting Distribution Board, Feeder Pillar Box, Junction Box etc.	To be handled / operated by engaging competent persons authorized to carry out work with such equipment / installation.
Rent collection	Prescribed rent by the management of TNFU/State Govt/ARTP to be paid by the lessee periodically (monthly/quarterly) to be collected as cheque favouring the ARTP and to be submitted to ARTP management
Exterior cleaning of building and structure and open areas	All surfaces expose to external ambiance. It is desired not to apply any cleaning chemicals on any electrical switches or panels. Cordoning of the work place should be done and caution sign board to be in place. Use gloves, safety shoes, goggles, safety harness at all times.
Cleaning of all wash room and toilet blocks	All points to be covered with deodorant and disinfectant cleaner. For ladies toilet only house-lady to be deployed
Wet mopping	Water Treatment room
Dry mopping	Roads , platforms and electrical panel rooms of ARTP complex except inside portion lessee's premises
Biometrics	All occupants records to be maintained through a biometric system
Security	Ensure 24/7 security by appointing 6 dedicated security staff
Fire Fighting	Operation and Maintenance along with necessary consumables. O&M of fire pumps, greasing, preventive maintenance of alarm system, sprinkler system, attending to sprinklers as an when necessary, detection and attending to leakages, if any, within the system. Regular checks and drills as per safety norms.
Emergency management	Handle any emergencies, any disaster
Social responsibility	Handle the management with social responsibility

## 7. **Pre-qualification of the OMA:**

The OMA must have the following capabilities:

- (a) Must have 5 – 10 years of experience in operating the maintenance of facility involving supply of 100 tons of water post treatment to different users on daily basis
- (b) Must be well versed with the installation, operation and maintenance of electrical utilities associated with housing/industrial projects.
- (c) Must be a registered Private Ltd company as per Tamil Nadu State Government's rules and regulations
- (d) Must take the responsibility of collecting rent/lease from end users.
- (e) Should have adequate financial capability to manage emergency situations and to meet critical financial requirements
- (f) Must have requisite manpower handling disaster management
- (g) Must have requisite manpower handling electrical equipments such as transformers, generators, light fittings, air blowers, motor pumps etc
- (h) Must have requisite manpower handling safety and security of the project premises

#### **8. Tender Methodology:**

The tender methodology proposal to be adopted will be in two stages comprising the **(i) Expression of Interests (EOI)** in the first stage. (ii) The second stage of tendering process will comprise inviting **techno-commercial bids**. The evaluation procedure for the tendering process would follow the quality cum cost based system. The cost associated with the preparation and submission of the response to the EOI and tender shall be borne by the bidder.

#### **9. Terms of Reference:**

Terms of reference for this EOI are as follows:

- (a) Only short listed OMA will be issued tender documents with an invitation to submit technical and financial bids separately.
- (b) Dean, Fisheries College and Research Institute (Chennai campus), Ponneri, Thiruvallur District reserves the right to cancel/ re-tender the process if the necessity so arises, or to seek further information/ details.
- (c) Firms/ organization if found to have indulged in any corrupt or fraudulent practices will have their EOI document not taken up for consideration.



**10. Name of the contact person for any clarifications:**

Dr. B. Ahilan, Dean (i/c), Fisheries College and Research Institute (Chennai campus), Ponneri,  
Thiruvallur District.



11. Whether the following documents have been enclosed with the application:-

a	A capability statement	Yes/ No
b	A write up on the understanding of the assignment.	Yes/ No
c	Company/ Organization profile giving details of current activities and management structure	Yes/ No
d	Evidence of incorporation	Yes/ No
e	Annual report including balance sheet, profit and loss account statement for the past three years.	Yes/ No

(Signature of the Bidder)

Name:

Place:

Date:

## **Annexure-II**

### **List of Major equipments of ARTP**

<b>S.No</b>	<b>Major Items</b>
1.	Water treatment and supply system
2.	Quarantine facilities
3.	Multi species Ornamental Fish Hatchery
4.	Heterotrophic based Indoor Raceways system
5.	Heterotrophic based Outdoor Raceways system
6.	Live Feed culture section
7.	Administrative Building cum Laboratory
8.	Transformer yard and generator
9.	Toilet block
10.	Security cum EB panel block