SUSTAINABLE AQUACULTURE AND RESPONSIBLE FISH CULTURE POLICY

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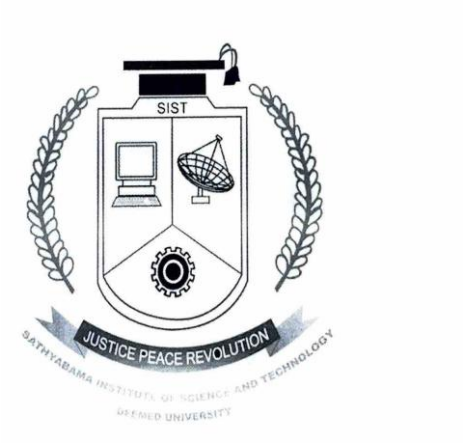

Sathyabama Institute of Science and Technology
(Deemed to be University)

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DOCUMENT CONTROL SHEET

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DOCUMENT CLASSIFICATION:

This document constitutes an official policy of the Deemed to be University. The provisions of this policy shall be implemented and interpreted in accordance with the applicable statutory and regulatory requirements and in conjunction with other relevant policies, regulations, ordinances, and guidelines of the Institution issued from time to time as approved by the appropriate authorities / Vice Chancellor of the University.

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

SUSTAINABLE AQUACULTURE AND RESPONSIBLE FISH CULTURE POLICY

Institutional Policy

1. PREAMBLE

Sathyabama Institute of Science and Technology recognises the importance of sustainable aquaculture and responsible fish culture in promoting the sustainable utilisation of aquatic resources, conserving aquatic biodiversity and minimising environmental impacts. The University is committed to encouraging environmentally responsible aquaculture practices through academic programmes, research activities, resource conservation and institutional sustainability initiatives.

This Policy establishes an institutional framework for responsible fish culture, sustainable feed management, water quality conservation, aquatic animal health, disease prevention, biosecurity, waste management, pollution prevention and environmental monitoring. It aims to integrate sustainability principles into relevant academic, research and operational activities through systematic implementation, periodic assessment and continuous improvement in order to improve the Aquaculture and Fish culture environmental developments.

2. OBJECTIVES

The objectives of this Policy are to:

- Promote responsible and environmentally sustainable aquaculture and fish culture practices.
- Encourage the appropriate selection and utilisation of indigenous and ecologically suitable aquatic species.
- Ensure efficient utilisation of water, feed and other natural resources.
- Maintain optimal water quality and aquatic animal health.
- Minimise pollution and environmental impacts associated with aquaculture activities.
- Strengthen biosecurity and disease-prevention measures.
- Promote responsible waste management and resource conservation.
- Support aquatic biodiversity conservation and ecosystem protection.
- Encourage responsible production, harvesting and handling of aquatic food, wherever applicable.
- Ensure appropriate quality, hygiene and traceability of aquatic food produced through relevant institutional activities, wherever applicable.
- Establish effective monitoring, documentation and compliance mechanisms.
- Promote awareness and capacity building in sustainable aquaculture practices.

3. SCOPE

This Policy applies to all relevant academic, research, experimental and operational activities undertaken by Sathyabama Institute of Science and Technology relating to aquaculture and responsible fish culture, including:

- Fish culture and experimental aquaculture systems.
- Hatchery and nursery-related activities, wherever applicable.
- Fish seed procurement, stocking and maintenance.
- Feed management and feeding operations.
- Water quality monitoring and management.
- Aquatic animal health management and disease surveillance.
- Aquaculture waste collection, treatment and disposal.
- Harvesting, handling and storage of cultured fish.
- Responsible production and management of aquatic food, wherever applicable.
- Research, training, awareness and capacity-building activities related to sustainable aquaculture.

This Policy is applicable to all faculty members, research scholars, students, technical personnel, administrative staff and other individuals involved in relevant University activities enabling to prevent pollution and environmental activities in and around the University.

4. SUSTAINABLE AQUACULTURE FRAMEWORK

Sathyabama Institute of Science and Technology shall adopt an integrated sustainability framework encompassing:

- Responsible Fish Culture Practices.
- Sustainable Feed and Resource Management.
- Water Quality Conservation and Management.
- Aquatic Animal Health and Biosecurity.
- Waste Management and Pollution Prevention.
- Aquatic Biodiversity Conservation.
- Responsible Aquatic Food Production and Handling.
- Environmental Monitoring and Compliance.

The framework shall support continuous improvement in aquaculture practices while ensuring environmental responsibility, ecological sustainability and responsible aquatic food production, wherever applicable.

5. RESPONSIBLE FISH CULTURE PRACTICES

The University shall promote scientifically appropriate and environmentally responsible fish culture practices through:

- Selection of suitable and ecologically appropriate culture species.
- Procurement of healthy fish seed from reliable and authorised sources.
- Maintenance of appropriate stocking densities.

- Adoption of species-specific culture protocols.
- Regular assessment of fish growth, survival and health.
- Prevention of unauthorised introduction or release of non-native species.
- Implementation of appropriate harvesting and handling practices.
- Ensuring hygienic harvesting and post-harvest handling of fish intended for aquatic food purposes, wherever applicable.

All relevant culture operations shall be planned and managed with due consideration of aquatic animal welfare, applicable food safety requirements and environmental sustainability.

6. SUSTAINABLE FEED AND RESOURCE MANAGEMENT

The University shall encourage efficient utilisation of feed and other resources through:

- Selection of nutritionally appropriate and quality-assured feed.
- Adoption of feeding practices based on species requirements and growth stages.
- Prevention of excessive feeding and feed wastage.
- Periodic assessment of feed utilisation and growth performance.
- Responsible storage and handling of feed materials.
- Efficient utilisation of water and other operational resources.

7. WATER QUALITY CONSERVATION AND MANAGEMENT

The University shall promote appropriate water quality management in all relevant aquaculture systems. Monitoring measures shall include:

- Dissolved Oxygen (DO).
- pH and temperature.
- Salinity, wherever applicable.
- Ammonia, nitrite and nitrate concentrations.
- Other relevant physicochemical and biological parameters.

Water exchange, filtration, treatment and reuse shall be managed wherever feasible to minimise water wastage and environmental contamination. Appropriate measures shall be adopted to prevent nutrient accumulation and deterioration of water quality in order to safeguard the health and other related aspects of the faculty and students of the University.

8. AQUATIC ANIMAL HEALTH AND BIOSECURITY

The University shall promote appropriate aquatic animal health and biosecurity measures, including:

- Regular observation and monitoring of fish health.
- Periodic assessment of disease occurrence and mortality.
- Maintenance of hygienic culture conditions.
- Disinfection of equipment and culture units wherever necessary.
- Appropriate quarantine and isolation procedures for incoming stock, where applicable.
- Responsible use of medicines and therapeutants under appropriate professional guidance.

- Maintenance of records relating to disease surveillance and treatment.

Preventive health management shall be prioritised to minimise disease occurrence and the unnecessary use of chemicals and antibiotics. Fish intended for aquatic food purposes shall be managed in accordance with applicable food safety and quality requirements.

9. WASTE MANAGEMENT AND POLLUTION PREVENTION

The University shall adopt systematic waste management practices based on the principles of Reduce, Reuse, Recycle and Responsible Disposal.

Waste management measures shall include:

- Collection and segregation of aquaculture-related waste.
- Appropriate handling of uneaten feed and organic residues.
- Safe collection and disposal of sludge and sediment residues.
- Prevention of uncontrolled discharge of untreated aquaculture wastewater.
- Responsible management of laboratory chemicals and biological waste.
- Maintenance of hygienic conditions in relevant operational and experimental areas.

All waste management activities shall comply with applicable environmental regulations and institutional guidelines in order to overcome the water scarcity and to save water.

10. AQUATIC BIODIVERSITY AND ECOSYSTEM CONSERVATION

Sathyabama Institute of Science and Technology shall promote aquatic biodiversity conservation through environmentally responsible aquaculture practices. Measures shall include:

- Preference for indigenous and ecologically suitable culture species.
- Prevention of accidental escape or release of cultured organisms.
- Avoidance of unauthorised introduction of exotic and invasive species.
- Responsible management of biological materials and culture residues.
- Protection of surrounding aquatic habitats from pollution and ecological disturbance.

Aquaculture-related activities shall be undertaken with due consideration of ecosystem integrity and the conservation of aquatic biodiversity.

11. ENVIRONMENTAL MONITORING AND PERFORMANCE ASSESSMENT

The University shall encourage periodic monitoring and assessment of relevant aquaculture activities to evaluate environmental performance and sustainability. Monitoring activities may include:

- Water quality assessment.
- Fish growth, survival and health evaluation.
- Feed utilisation assessment.
- Water consumption and reuse monitoring.
- Waste generation and disposal assessment.
- Evaluation of biosecurity and disease-management practices.

- Assessment of harvesting, handling and quality parameters of aquatic food, wherever applicable.
- Environmental compliance verification.

Recommendations arising from monitoring activities shall be incorporated into appropriate operational and management improvements under the supervision of the appropriate authority / Vice Chancellor of the University.

12. ENVIRONMENTAL AWARENESS AND CAPACITY BUILDING

The University shall encourage environmental awareness and responsible aquaculture practices through:

- Training programmes and hands-on workshops.
- Academic and research-based capacity-building activities.
- Awareness programmes on sustainable aquaculture and responsible fish culture.
- Demonstration and promotion of environmentally responsible fish culture techniques.
- Encouraging student and research scholar participation in sustainability initiatives.

13. GOVERNANCE FRAMEWORK

The implementation of this Policy shall be coordinated through the institutional administrative framework of Sathyabama Institute of Science and Technology.

The governance framework shall involve:

- University administration and designated institutional authorities.
- Relevant academic and administrative departments.
- Faculty members and designated personnel responsible for relevant activities.
- Research scholars, students and technical personnel.
- Institutional environmental and sustainability committees, wherever applicable.

The University shall ensure appropriate coordination, implementation, monitoring and periodic review of this Policy through its designated authorities.

14. ROLES AND RESPONSIBILITIES

University Administration

The University administration shall:

- Facilitate the implementation of this Policy across relevant institutional activities.
- Promote adherence to responsible aquaculture and environmental sustainability practices.
- Support appropriate environmental monitoring and sustainability assessments.
- Ensure compliance with applicable statutory and institutional requirements.
- Review implementation and facilitate necessary improvements.

Faculty Members and Designated Personnel

They shall:

- Supervise relevant aquaculture and fish culture activities.

- Ensure appropriate implementation of culture and biosecurity protocols.
- Monitor water quality and aquatic animal health, wherever applicable.
- Promote efficient utilisation of water, feed and other resources.
- Maintain relevant operational, harvesting and environmental records.

Research Scholars, Students and Technical Personnel

All personnel shall:

- Follow prescribed aquaculture and biosecurity protocols.
- Utilise water, feed and other resources responsibly.
- Maintain hygienic and environmentally responsible working conditions.
- Participate in relevant sustainability and awareness initiatives.
- Report disease occurrence, environmental concerns and operational irregularities to the designated authorities.

15. MONITORING, COMPLIANCE AND REPORTING

Sathyabama Institute of Science and Technology shall establish appropriate mechanisms for:

- Periodic review of relevant aquaculture practices.
- Water quality and aquatic animal health monitoring, wherever applicable.
- Maintenance of culture and operational records.
- Assessment of waste management practices.
- Monitoring of aquatic food handling and quality requirements, wherever applicable.
- Verification of environmental compliance.
- Identification and implementation of corrective and preventive measures.

The Policy shall be reviewed periodically and updated in accordance with applicable statutory requirements, institutional sustainability guidelines and recognised standards for responsible aquaculture.

16. CONFLICT OF INTEREST

Sathyabama Institute of Science and Technology shall ensure transparency, fairness and accountability in all activities associated with the implementation of this Policy.

- Faculty members, researchers and personnel involved in aquaculture-related activities shall disclose any actual, potential or perceived conflict of interest.
- Procurement of fish seed, feed, equipment, chemicals and other materials shall be undertaken in accordance with established institutional procurement procedures.
- Personal, financial or professional interests shall not influence institutional decisions, procurement processes, research activities or resource utilisation.
- Any identified conflict of interest shall be reported to the appropriate University authorities for review and necessary action.
- All activities shall be conducted / administered / supervised in accordance with institutional policies, applicable regulations and ethical standards.