VIKRAMA SIMHAPURI UNIVERSITY::NELLORE

INSTITUTIONAL DISTINCTIVENESS

Title: Multi-Disciplinary Research through Natural Tank & Pond Aquaculture facility

University in a neo-liberal age is the enlightenment of an entire society, instilling values of compassion, empathy, justice and inclusivity into the very fabric of education. University's Vision and Mission are crafted in tune with this noble commitment, impelling knowledge generation, dissemination, research and extension towards higher goals resulting in a constant thrilling for global eminence and social transformation. The university is located at Vekatachalam mandal near Kakutur village, it is access to industries as Nellore is surrounded by Special Economic Zone, Sricity, Krishnapatnam Port, Food processing Industries and SHAR Sriharikota etc,.University has identified the need for world class research and as one of its distinctiveness has formulated with Inter-disciplinary platform.

The vision and mission of Natural Tank and Pond Aquaculture facility are:

Hand-on training and skill orientation to the students: To provide hands on experience according to the curriculum & project work.

Promotion of research: To inculcate Inter-disciplinary research among faculty

Community development as a part of University outreach activity: To create awareness/ technical enrichment among the local needy people

The natural tank connected to the university campus is one of the major advantages for aquaculture related research and teaching activities engaging hands on experience of the students. The faculty of marine biology actively engaged in the aquaculture research and extension activities by aquaculture management practices and testing the role of probiotics in the growth and survival of the economically important cultivable aquatic species with a motto of 'lab to land' programme as a part of their curriculum and research. In the premises of the natural tank facility, the university is maintaining an aquaculture pond facility also for experimental trails of different cultivable species and helping in extension activities for neighborhood aqua farmers/fishermen. The training programmes, awareness activities, hands on experience helps to provide self-employment to the needy people.

Department of Chemistry taking part in the analysis of water quality and finding the proximate composition of the feed used in the fish, prawn and shrimp culture and its suitability for the aquaculture practice. Moreover they do physico- chemical analysis of water, biological oxygen demand and chemical oxygen demand for its suitability in growing the cultivable species.

Biotechnology is offering elective courses entitled Aquatic Biotechnology and Pharmacology, Nutritional Science, Molecular Physiology & Marine Biotechnology to cater the needs of local aquaculture industry. The students and faculty members of the department are actively engaged in elucidating the growth dynamics of cultivable aquatic and marine species with respect to biotic and abiotic factors. Further through endocrine manipulation initiated induced breeding and growth in fish and prawn species. Microbial pathogenic analysis of water is assured by students and staff of microbiology with an emphasis to identify the control methods of pathogens while culturing. The plankton analysis for survival of cultured species is determined in the laboratories of department of Botany and Zoology. Dissolved Oxygen (DO), Alkalinity, Hardness, Ammonia, pH parameters are monitored using Internet of Things (IoT) through Computer Science Department. The department of Food Technology is involved in preservation, processing and storage of fish, prawn and its products.

Department of social work is actively engaging in community development programme which focus on fishermen development. There is an ample scope to increase the income of aqua/fisheries, thereby improve the income of fisherman by providing awareness and enabling them to acquire infrastructural support to adopt scientifically improved fishing and aquaculture practices. Many have not adopted the advanced fishing technology; hence there is a need to educate the available policies to improve their socioeconomic conditions to maximize their contribution to economic, cultural and social development.

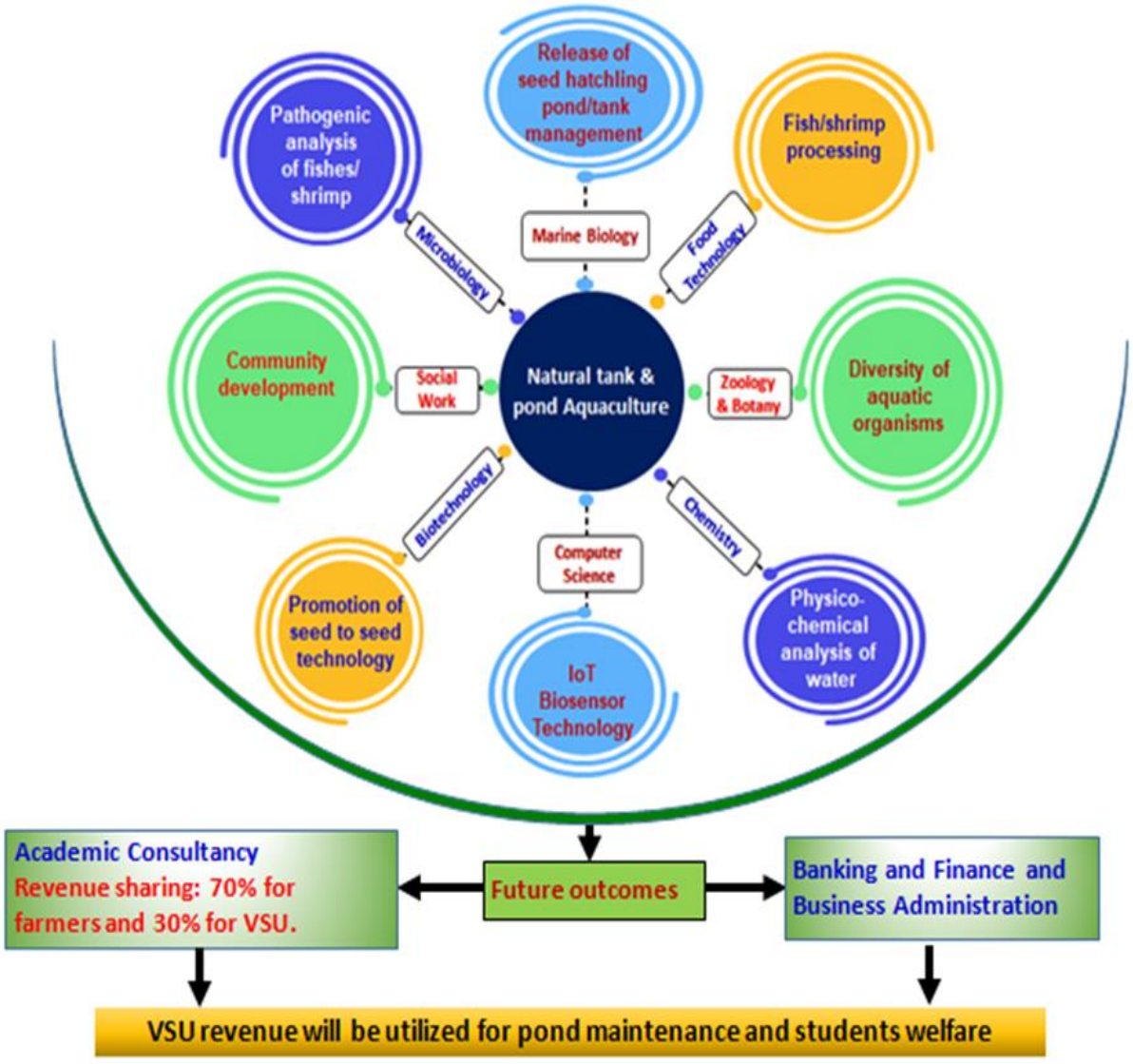
The university has a potential with an emphasis to multi-disciplinary activity in line with its mission, vision and locality by involving students and faculty of various departments to implement its strategic plan for the benefit of inmates and cater the needs of local communities. The local aqua farmer/fishermen permitted to capture the fish for free and are motivated to enrich their knowledge on tank/pond management during aquaculture. This part has been taken up by social work and marine biology departments.

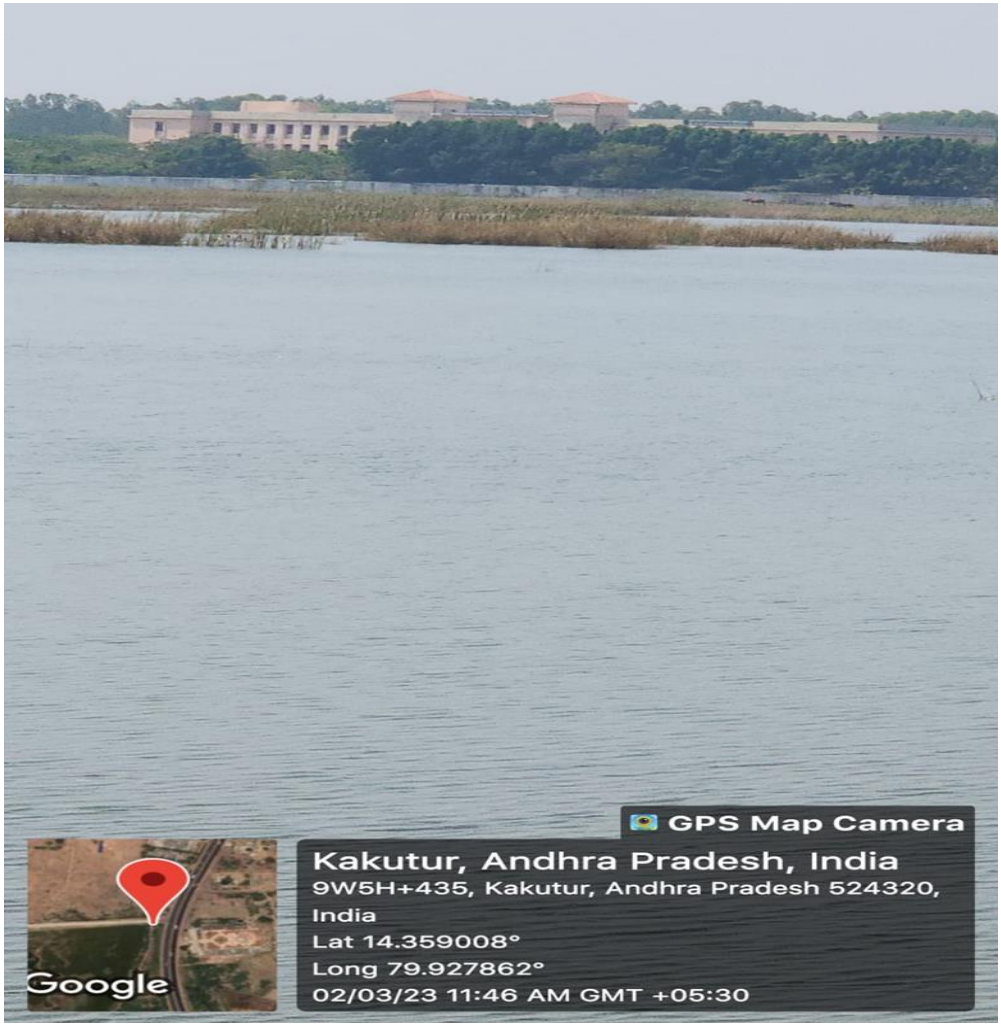
The University community-partnership practical application projects have been generated with the participation of multidisciplinary departments. These field studies have provided solutions to community problems related to fishermen. In these cooperative projects, students in their fieldwork have maintained a direct relationship with university departments and community members, thus acquiring communication skills, leadership and decision-making experience.

The partnership between the community and academia shows scientific knowledge application for the attention and solution of problems related to aquaculture. However, on the other hand, the experience and practice of the community provide a unique scenario for the transfer of experiences, pragmatism, and field lessons that allow the student to practice and learn sustainable techniques, some of which come from ancestral knowledge, which constitutes an imprint in the culture of human beings.

In further course of development, VSU stepping towards to establish consultancy agreement with local farmers/fisherman in selling the fish, prawn and its products in the ratio of 70:30 (Fisherman:

VSU) which will be used for the student welfare wherein students of participating department will get benefited through "*Earn while Learn*" programmes and pond/ tank management. Department Commerce (Banking & Finance) will participate to find out the logistics of expenditure and profit in this whole process, while Business Administration will help in marketing the fish, prawn and its products.

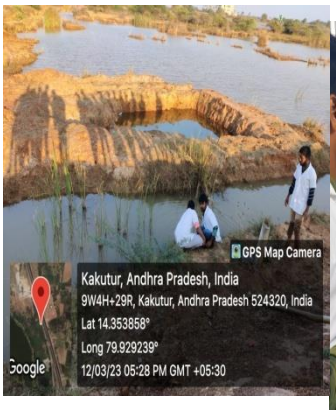




Natural tank located in front of the VSU main campus

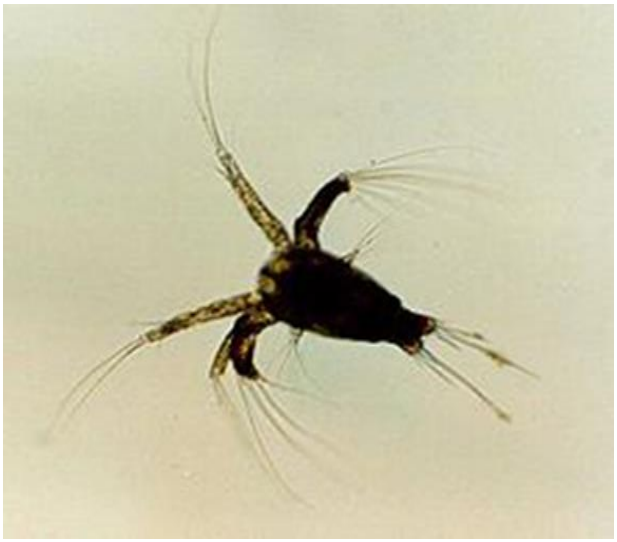
Pond constructed beside the natural tank for aquaculture research promotion

Fish Seed release by Honourable Vice Chancellor, Registrar, Principal, faculty and students of Marine Biology in to the natural tank/pond

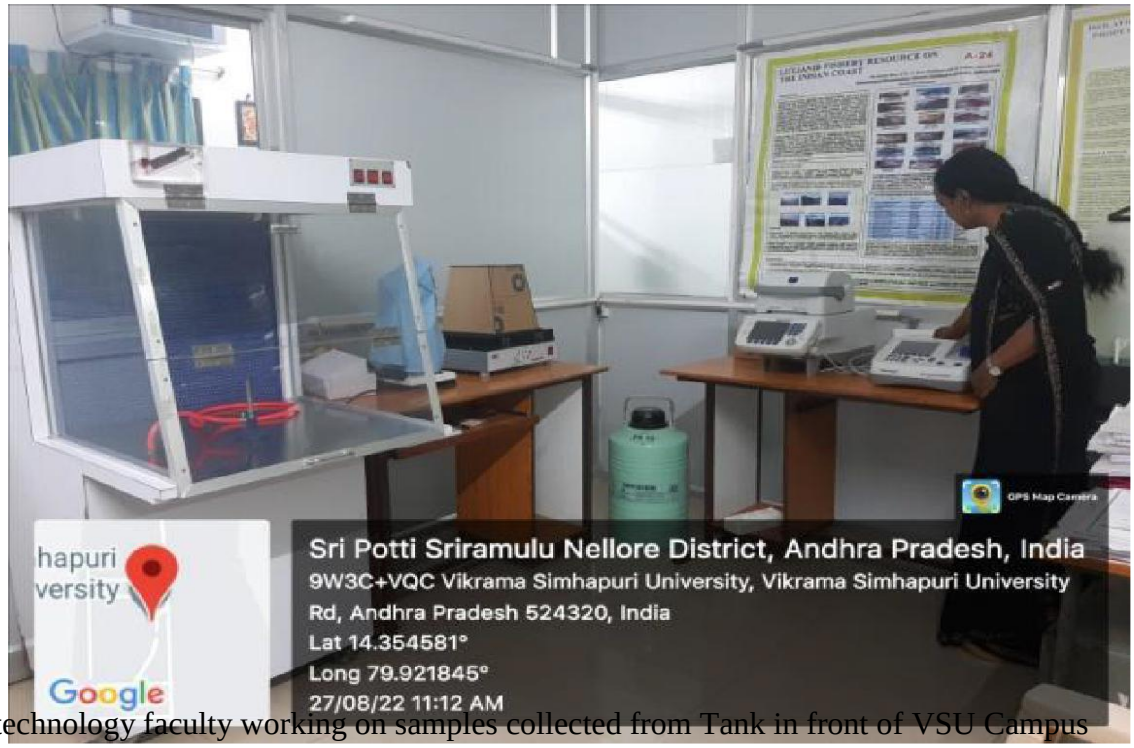



Collection of water samples and its analysis for physiochemical parameters by students and staff of chemistry department

Students of Microbiology observing the water samples under microscope




Microscopic image of Phytoplankton and Zooplankton



Biotechnology faculty working on samples collected from Tank in front of VSU Campus

Research scholars are demonstrating the analysis process of water samples

Students are analysing the samples

Local fisherman catching fish by using fish net in natural tank

Captured fish and shrimp, and its processing by Fisher women

Creating awareness to local aqua farmers and fisherman by faculty of Social Work and Marine Biology

Creating awarness on fish and prawn products and its importance in market

VSU faculty undertaken aquaculture related research:

Name of the Scheme/Project/ Endowments/ Chairs	Name of the Principal Investigator/ Co Investigator (if applicable)	Name of the Funding agency	Department	Year of Award	Funds provided (INR in lakhs)	Duration in Years
Exploring Novel Bioactive Compounds from Marine Bacteria	Dr. G. Vijaya Ananda Kumar Babu	DST-SERB	Biotechnology	2018	45.46	3
Molecular Identification Phylogenetic Dissection and Barcoding of Snapper (Perciforms: LUTJANIDAE) By using MT-COI Gene	Dr. KVL. Shrikanya Rao	DST-SERB	Biotechnology	2017	57.07	3
Isolation, Purification and Charecterization of a Novel Alkaline laccase from a Marine Bacterium	Dr. K. VidyaPrabhakar	DST-SERB	Biotechnology	2016	11	2
Elucidation of role of ecdysteroids and retonic acid in the regulation of growth and reproduction in selected edible crustanceans of aquaculture importance	Dr. S.B. Sainath	DST-SERB	Biotechnology	2015	28.7	3
Exploring the Marine fungal Diversity of Coastal Andhra Pradesh for Sustainable Aquaculture	Dr. Ch. Vijaya	University Research Fellowship	Marine Biology	2019	1.0	2
Assessment of Heavy metals in Nellore coastal ecosystems: Analysis of Biota and remedial action plan	Dr. Ch. Venkatrayulu	University Research Fellowship	Marine Biology	2017	1.0	2
Defluoridation of water using natural and synthetic sorbents through adsorption	Dr. Y. Vijaya	University Research Fellowship	Chemistry	2017	1.0	2

Gmail

Vijay Gundi <gundi.vijay@gmail.com>

SERB-Notification

Dr. Pramod Kumar Prasad <pk.prasad@serb.gov.in> Tue, Jan 30, 2018 at 1:52 PM
To: "info@serbonline.in"@imsva02.cdacnoida.in

Science and Engineering Research Board
(Statutory Body Established Through an Act of Parliament : SERB Act 2008)
Department of Science and Technology, Government of India

SCIENCE & ENGINEERING RESEARCH BOARD (SERB)

(Statutory Body Established Through an Act of Parliament : SERB Act 2008)

Science and Engineering Research Board
5 & 5A, Lower Ground Floor
Vasant Square Mall
Sector-B, Pocket-5
Vasant Kunj
New Delhi - 110 070

Approval Letter

File Number: EEQ/2017/000386

Dated: 30-Jan-2018

Subject: Project titled "Exploring Novel Bioactive Compounds from Marine Bacteria".

Dear Dr. Vijaya Anandakumarbabu Gundi,

The project cited above has been recommended by the related **Empowerment and Equity Opportunities for Excellence in Science** to the Science and Engineering Research Board (SERB) for funding. The following are the items recommended for a period of 3 years. The final budget to be sanctioned would be based on quotations received, existing norms, funds availability etc.

The committee recommended the following budget

Manpower : Rs. 936000
-> Junior Research Fellow - 1
Equipment Details : Rs. 1700000
-> Transilluminator - 1
-> Freezer (-86°C) - 1
-> Microplate Reader - 1
-> Incubator Shaker - 1
Consumables : Rs. 1200000
Travel Cost : As per norms
Contingencies : As per norms
Overhead : As per norms

Kindly follow the below steps only then you will be able to acknowledge the approval letter :

1. Go to www.serbonline.in through your credentials

2. Go to Menu --> Proposal submission --> View submitted proposals

3. Click on the link under Status column "Proposal Approved, Acknowledgment pending from PI"'

You are now requested to upload the lowest quotation for equipment/s (including freight, insurance, customs charges etc., if any) and salary structure for the project staff (including HRA, Medical Benefits, if applicable etc.)

at the earliest so as to enable us to issue the financial sanction. A certificate stating that any visit abroad for a period more than eight weeks would be undertaken after due permission from SERB, may also be submitted.

Kindly upload RTGS details of the implementing institute to facilitate transfer of the fund as per the template. Kindly quote the reference number in all future correspondence. The project's reference no. EEQ/2017/000386 may also be mentioned in all research communications arising from the above project.

Yours sincerely,

(Dr. Pramod Kumar Prasad)

Scientist C

Email: pk.prasad@serb.gov.in

Ph: 911140000336

Dr. Vijaya Anandakumarbabu Gundi

Biotechnology

Vikram Simhapuri University , Chakali St, Pogathota, Nellore, Ap, Nellore, Andhra Pradesh-524001