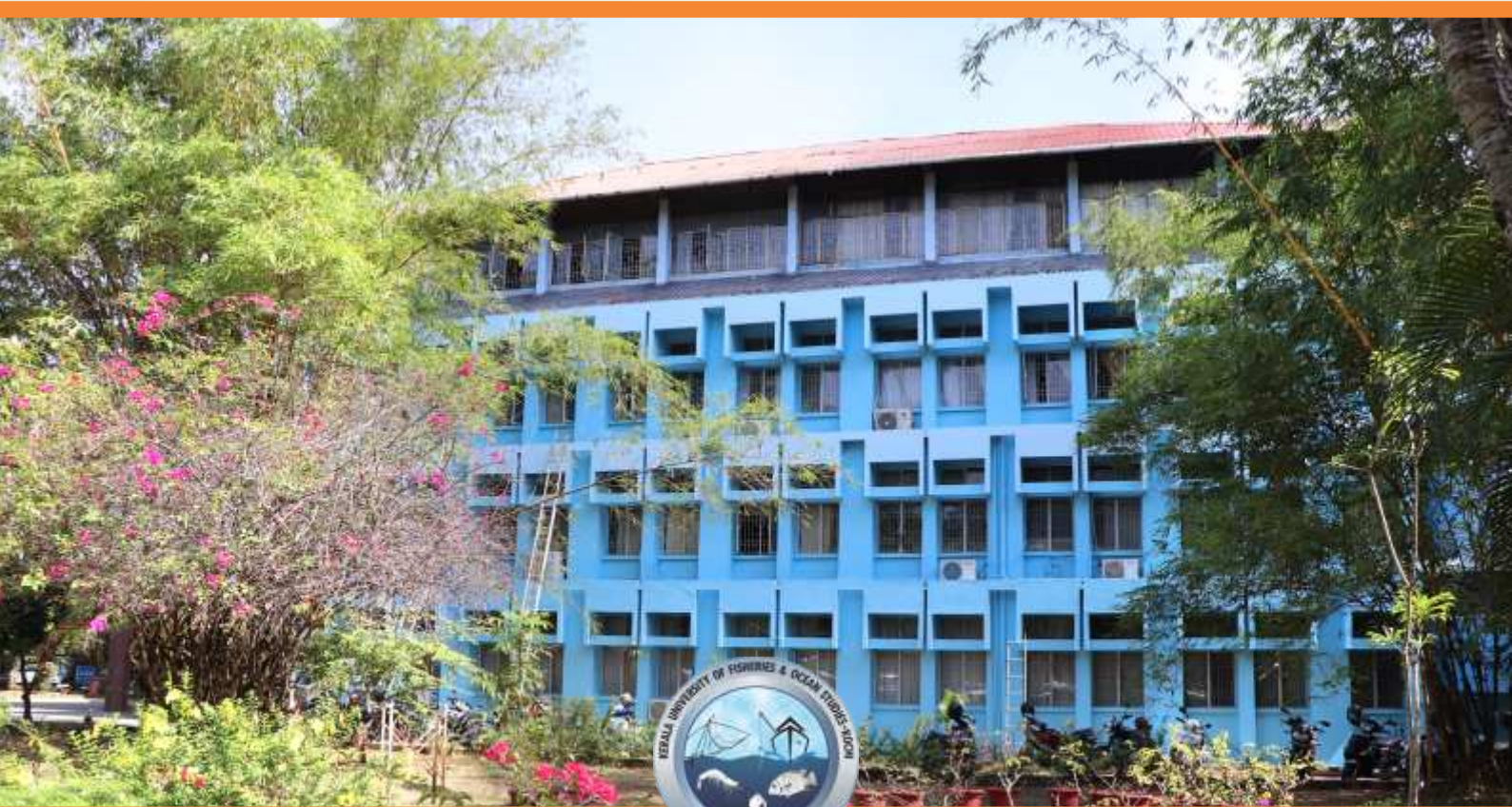


ANNUAL REPORT 2017-2018



KERALA UNIVERSITY OF FISHERIES AND OCEAN STUDIES

Panangad, Kochi- 682 506, Kerala , India

Phone: 0484 -2700964, 2700598, Fax: 0484-2703782

Website:www.kufos.ac.in

ANNUAL REPORT 2017-2018



KERALA UNIVERSITY OF FISHERIES AND OCEAN STUDIES

Panangad, Kochi- 682 506, Kerala , India

Phone: 0484 -2700964, 2700598, Fax: 0484-2703782

Website:www.kufos.ac.in

KUFOS Annual Report 2017-2018

Published by

Registrar, Kerala University of Fisheries and Ocean Studies, Kochi

Editorial Committee

Dr. Manojkumar P.B. Registrar, In-charge- Chairman

Mr. Raju Raphael Director, Public relations and Publications -Convener

Dr. Susamma A.P., Director, Planning and Development-Member

Dr. Sureshkumar, Director, SOST -Member

Dr. Anoop K.K, Assistant Professor, SME- Member

Printed at:

Sibi Job , Kochi

KUFOS Annual report is an In-house publication.

This is a report of activities of KUFOS during 2017-2018 period

© Kerala University of Fisheries and Ocean Sciences, Kochi

C O N T E N T S

1. From Vice Chancellor's Desk.....	..
2. Our Chancellor.....	..
3. Our Pro-Chancellor.....	..
4. Our Vice Chancellor.....	..
5. University Statutory Officers.....	..
6. Faculty.....	..
7. Non-Teaching and Supporting Staff.....	..
8. The University.....	..
9. University Administration.....	..
10. Faculties, Schools and Departments.....	..
11. Academic Work Report.....	..
12. Directorate of Research.....	..
13. Directorate of Extension.....	..
14. Finance
15. Infrastructure.....	..
16. University Library.....	..
17. NSS Activities.....	..
18. Physical Education	

UNIVERSITY LOGO



This emblem signifies the mission, goals and motto of Kerala University of Fisheries and Ocean Studies. It symbolizes the co-existence of all forms of aquatic life and our responsibility to preserve the ecology and conserve the bio-diversity by judicious exploitation of aquatic resources for sustainable development.

The deep and light blue colours respectively represent the ocean and sky. The waves in the sea represent the dynamic nature of the sea with all its mystery and music. “All deep things are music” (Carlyle). The ocean is our planet's life belt. The very survival of the human species depends upon the maintenance of an ocean, clean and alive.

“For the sea lies all about us.... The continents themselves dissolve and pass to the sea.... In its mysterious past, it encompasses all the dim origins of life.... And receives in the end... the dead husks of that same life. For all at last return.... To Oceanus, the ocean river, like the ever-flowing stream of time, the beginning and the end” (Rachel L. Carson- The Sea Around Us, 1951).

Fiat piscis:

Let there be fish. This is the literal translation of the Latin words “*FIAT PISCIS*”. The idea is to grow more fish with a view to ensuring food and nutritional security. As Lao-tsu, the Chinese philosopher, rightly said centuries ago: “Give a man a fish and you feed him for a day. Teach him how to fish, and you feed him for a lifetime”.

Chinese net:

It is a passive gear operated by a group and it represents team work and co-operation, symbolizing the aspirations of the traditional fisheries sector.

Ship:

Used for exploring and exploiting oceanic resources, this fully equipped vessel symbolizes the modern sector, with its sophisticated technology.

Nansen bottle:

Operated through a pulley and attached to the ship, it represents the concern for maintaining water quality and the need to contain water pollution.

Shrimp:

As a foreign exchange earner, this crustacean has tremendous importance in the fishery economy of Kerala.

Pearl spot:

'Karimeen' (*Etroplus suratensis*), the State fish of Kerala, represents the dainty delicacy of the State.

Conch:

A mollusc, the shell with its mathematical patterns, used for carrying holy water during rituals, is a sublime symbol with spiritual, aesthetic, artistic, rejuvenating and medicinal values.

Open book:

It symbolizes knowledge and it signifies disinterested search for truth by research and learning.



FROM VICE CHANCELLOR'S DESK

Prof. Dr. A. Ramachandran
Vice Chancellor

It is an honour and privilege for me to present the annual report of the year 2017-18 on the of the First Fisheries and Ocean Studies University of India, the Kerala University of Fisheries and KUFOS continuously combines traditional values of excellence in teaching and research with an attitude that challenges conventional practices and produces new ways of developing and delivering courses. KUFOS strictly follows its Vision 2020 Plan. I am to mention this is the only university in our country having a unique blend of ICAR in offering fisheries courses; under UGC in offering various M.Sc programmes and under AICTE in having M.Tech, MBA and LLM courses. By introducing specialized courses in the needy areas, the student strength has gone up to 900 in the present academic year.

With a short span of about seven years KUFOS has identified the major research needs and gap to find solution to the problems being faced by the fisheries and oceanic sector to improve the sustainability of these resources. A vibrant culture of research with various

research projects is aimed at the integrated and sustainable growth of fisheries sector, in partnership with the Government, industry, fish farmers and fisherfolk. Under this objective KUFOS has started three Centre of Excellences in Aquaculture, Aquatic resource Management and Food processing beside a Research centre for advanced studies in Management, entrepreneurship development and in research in fisheries agri-business and allied sectors. The major objectives of the centres are to develop brood stock of cultivable fishes, improvising knowledge on conservation and management of aquatic living resources and development of value added products from fish and agricultural farm produce. An intensive training and consultancy services will be given to stake holders, artisans and students in fisheries sector.

I am much proud to mention that KUFOS now has 34 PG programs in different disciplines and a new PG program in M.Sc., Environmental Sciences has been started during 2017-18 academic year to develop a holistic approach to environmental and resource problems in students from diverse academic, professional and cultural backgrounds.

Since the food industry is the largest industry and it needs highly trained professionals in food science and Technology to ensure the supply, quality and safety of food for the nation, I am immensely happy to mention, a new B.Tech Program in Food Science and Technology is functioning with an intake of 40 students. The special reservation policy for children of fishermen is now practiced by providing 20% seats supernumerary to all courses.

The students of KUFOS by discussion with fishery officials, fishermen, entrepreneurs and environmentalists in sustaining the fishery resources of Vembanad lake, came out with a recommendation of removal to 50% of stakenet from the lake. This indicates that KUFOS can produce expertise professionals in the field and mould them as ambassadors of sustainability. The students and teachers of KUFOS are actively participating every year in 'Vembanad fish count' to study the sustainability and resource assessment of this lake.

I am also happy to inform that KUFOS has been operating 25 plan and six externally funded projects to enhance the aquaculture production, conservation of biodiversity and fish preservation and in value addition. Fifty Research papers were published by the faculty during the current year.

I am much pleased that Referral Disease Diagnostic Laboratory is now functioning in KUFOS, this centre effectively establishes a new network for disease surveillance, monitoring and prevention of disease in aquatic animals of Kerala State. In this program, 1200 framers were benefitted.

In terms of infrastructural development, this year, KUFOS has established one Amenity building and a New Academic block at Pudukkottai funded by the State Govt. of Kerala. KUFOS has signed three MoUs with National institutes in the area of Fisheries and Ocean Studies. Besides, a part of Academic block of 944 m², residential flat complex for senior staff of 287 m² and Men's Hostel ground floor of 688 m² has been completed.

To create employment opportunities to fisherfolk and to ensure their livelihood security, KUFOS has adopted two Panchayats and One municipality for promoting diversified aquaculture and allied activities. I am happy to mention by this adoption program, 121 beneficiaries have started cage culture. As the village adoption is found to be more successful in promoting aquaculture, such programs will also be carried out in this year in Kannur and Kasaragod Districts of North Kerala.

A dedicated and well equipped Digital Library Unit has been established at KUFOS Library to update the digital content. A new institutional repository named as 'MEENAM' is now enriched by adding 1200 pages to the present collection during the year. The Library is also conducting various training programs and workshops on and off for library professionals and users.

With a view to educate unlimited number of participants worldwide and to create a community of lifelong learners, KUFOS has initiated Massive Online Open Courses (MOOC) and 32 courses have been identified and recording of four courses has been completed.

The Faculty members participated in many international and national conferences and presented papers. KUFOS also gives training on need basis to the staff of Fisheries Department on request. This year training was given to staff of state fisheries department on Aquatic Animal Disease Surveillance and Diagnostics. The third convocation of KUFOS was conducted on 18th February 2017 where 164 candidates were conferred with their degrees under 23 disciplines

OUR HONOURABLE CHANCELLOR



SHRI. JUSTICE P. SATHASIVAM
HON'BLE GOVERNOR OF KERALA

OUR HONOURABLE PRO-CHANCELLOR



Smt J MERCYKUTTY AMMA
Hon'ble Minister for Fisheries, Harbour Engineering & Cashew Industry
Government of Kerala



INTRODUCTION

The Kerala University of Fisheries and Ocean studies (KUFOS) is an autonomous public funded institution established on 20th November 2010. The first Fisheries University in the country, KUFOS with its enchanting blue building stands in harmony with the greenery at Panangad, 12 km away from Kochi city, along the National Highway-66. It provides high quality instructional programmes in fisheries, ocean sciences and allied subjects. The University now has a sprawling campus of 75 acres in the headquarters at Panangad, brackish water and marine aquaculture area spanning 50 acres at Fisheries research station, Puduveypu and extensive 10 acres at Thiruvallom near Vizhinjam.

The College of Fisheries, Panangad under the Kerala Agricultural University was the only institution in the fisheries sector in the State imparting undergraduate professional degree programme. Kerala University of Fisheries and Ocean Studies was established in November, 2010 by an Act of the Kerala State Legislative Assembly by delinking the College of Fisheries from the Kerala Agriculture University and started functioning on 01.04.2011. KUFOS was established for the development of manpower in fisheries and ocean studies and for ensuring proper and systematic instruction,

teaching, training and research and extension exclusively in fisheries and ocean studies in the State of Kerala. This is the primary and principal institution of Kerala State for providing human resources with skills and technology required for sustainable developments as a Centre of Excellence for human resource development in Fisheries and Ocean Studies. It is the nodal agency to establish relationship with institutions at international level

KUFOS imparts quality education comparable with world class standards and giving significance to research oriented studies with effective meaningful and rewarding extension activities. With a view to producing technocrats of high calibre we provide highly qualified faculty, full fledged infrastructure facility and good linkages with reputed national and international institutes. The academic excellence is intended to be attained by undertaking graduate and post graduate teaching and research programmes in emerging disciplines of fisheries science. With a view to meeting the requirement of state and national priorities, we are introducing specialized courses in the needy areas thereby creating professionals and experts. Results of research emerging various disciplines leading to successful technologies need to be disseminated to the end users at the grass root level.

UNIVERSITY STATUTORY OFFICERS



VICE CHANCELLOR, Prof. (Dr.) A. RAMACHANDRAN

PRO VICE CHANCELLOR
Prof. (Dr.) K. PADMAKUMAR



REGISTRAR
Dr. V.M. VICTOR GEORGE



FINANCE OFFICER
SHRI. JOBY GEORGE P.



UNIVERSITY ENGINEER
Jayakrishnan P.S



CONTROLLER OF EXAMINATIONS
(In-charge)
Dr. K.P.Subhashchandran



DIRECTOR OF RESEARCH
Dr.T.V.Sankar



DIRECTOR OF EXTENSION (I/C)
Dr. DAISY C. KAPPEN

THE UNIVERSITY

Kerala University of Fisheries and Ocean Studies (KUFOS) is an autonomous public funded institution established on 20th November 2010, and governed by the Kerala University of Fisheries and Ocean Studies Act, 2010. As per the Notification No.19540/Leg.II/2010/Law Dated 28.01.2011, the Government of Kerala have promulgated Act 5 of 2011 forming Kerala University of Fisheries and Ocean Studies (KUFOS).

KUFOS is the first Fisheries University formed in India and it comes under the Ministry of Fisheries. As per G.O. (P) No. 510/F & PD dated 10.05.2011 the Government of Kerala disaffiliated College of Fisheries, Panangad and Fisheries Station, Puduveyypu from Kerala Agricultural University and these institutions became the part and parcel of the newly formed Kerala University of Fisheries and Ocean Studies w.e.f. 01.04.2011. The territorial jurisdiction of the University extended to the whole of the State of Kerala and the Headquarters of the University is at Kochi in Ernakulam District.

The Panangad campus, which is the Headquarters of the University, is 12 km away from Kochi city, along the NH 47 and sprawls in area of 85 acres. Fisheries Station, Puduveyypu having an area of 50 acres is situated in Vypeen Island (90 58 – 100 N lat. and 760 10-760 12' E long.) on the North-Western bank of Cochin bar mouth, Cochin taluk. It is at a distance of about 2 km from Vypeen-Pallippuram Road. The Arabian Sea on the West and the Cochin barmouth on the South. Besides these campuses, the Govt. have allotted 10 acres of land at Thiruvallam, near Thiruvananthapuram for setting up a Regional Station.

Kerala University of Fisheries and Ocean Studies is the primary and principal instrumentality of Kerala State in providing human resources, skills and technology required for the sustainable development of Fisheries and Ocean Studies. It acts as a centre of excellence for human resource development in Fisheries and Ocean Studies and the nodal agency to establish relationship with institutions and universities functioning at National and International level. The mission of the University is to serve as a flagship University of higher learning through demonstrated and growing excellence in teaching, research, extension, training, scholarship and creative work in Fisheries and Ocean Studies, comparable with global standards that will benefit the country and the world at large.

His Excellency, the Governor of Kerala, is the Chancellor and the Hon'ble Minister for Fisheries is the Pro-Chancellor of the University. The chief executive body of the University is the University Governing Council. The Vice Chancellor is the principal executive officer who is assisted by the Pro-Vice Chancellor, Registrar, Deans of Faculties, Controller of Examinations, Director of Research, Director of Extension, Directors of Schools, Heads of Departments, and Finance Officer.

MISSION, VISION AND GOALS

MISSION

The mission of the university is to serve as a flagship university of higher learning through demonstrated and growing excellence in teaching, research, extension, scholarship and creative work in fisheries and ocean studies, comparable with global standards that will benefit the country and the world at large.

VISION

- To produce professionally and technically competent manpower in Fisheries and Ocean studies to cater the needs of the fast developing sector.
- Develop entrepreneurship among the fisheries graduates by imparting hands on training and give opportunities to develop management skills through Fisheries Work Experience Programme.
- Undertake research and extension activities in the field of Fisheries and Ocean studies by undertaking research in frontier areas and by promoting interdisciplinary/ inter-departmental/ inter-institutional co-operation.

- Provide employment opportunities for the people especially fisher folk by imparting trainings on modern techniques of fishing, primary handling, preservation, production of value added fishery products, ornamental fish culture, hatchery production of seeds of various cultivable fin and shell fishes and their farming.
- Provide consultancy services so as to put into practice the technologies developed among the entrepreneurs and generate income for the institution.
- Achieve the mission and goals laid down by the University.
- Develop infrastructure facilities and inter-institutional co-operative programmes in order to make the campus the nucleus of the Fisheries and Ocean studies in the world.

GOALS

- To further the advancement in learning and conduct research in fisheries, ocean studies and allied subjects .
- Impart education in fisheries and ocean studies and allied subjects.
- Formulate new courses and curriculum in fisheries and ocean studies sector in accordance with the technical advances in the respective fields
- Act as a nodal agency to establish relationship with institutions and universities functioning at national and international levels
- Act as a centre of excellence having leading role for HRD in Fisheries and Ocean studies
- Foster and encourage entrepreneurship in Fisheries and Ocean studies.

Objectives of the University

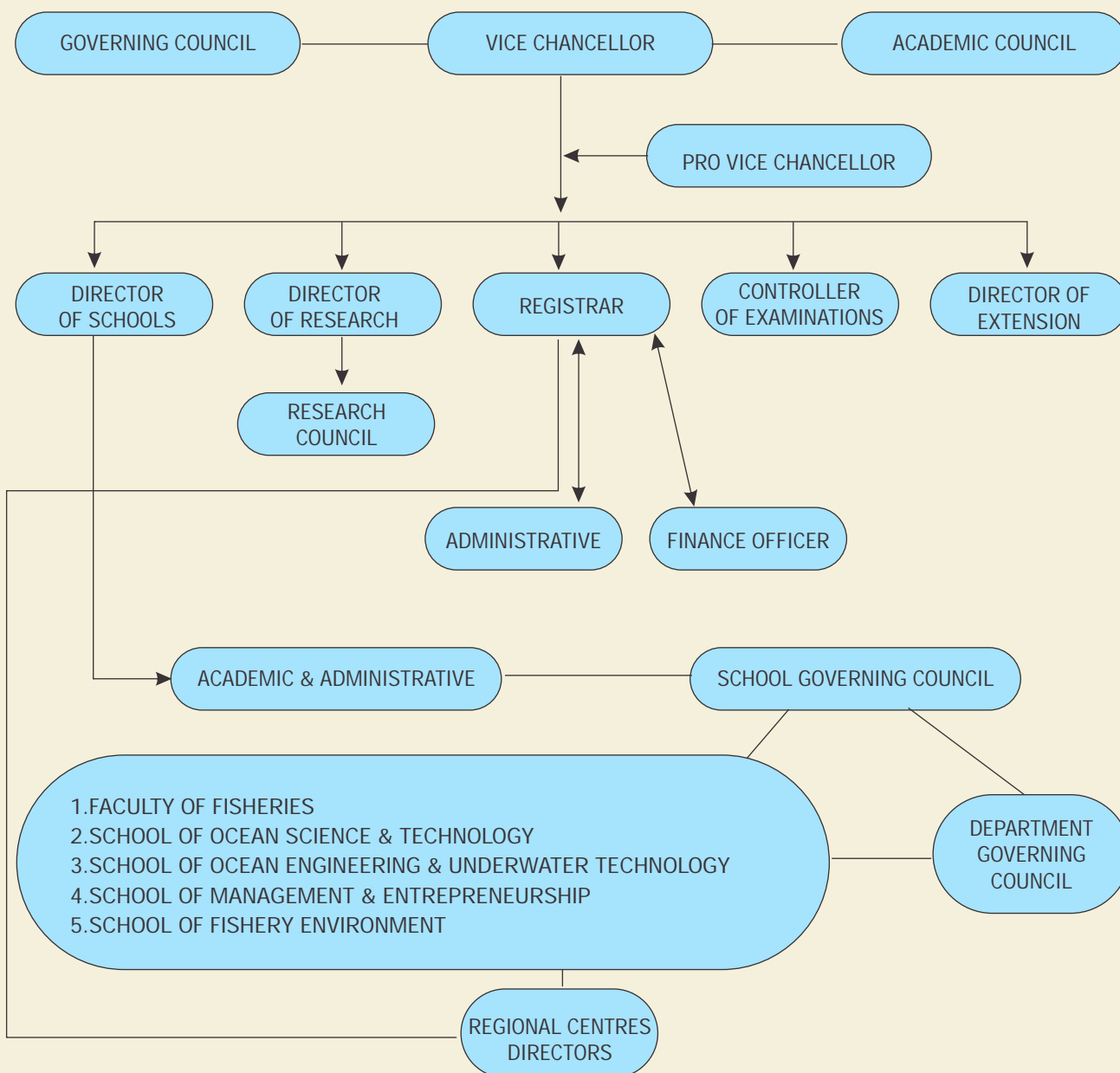
- (i) making provisions for imparting education in fisheries, ocean studies and other allied branches of learning and research scholarship;
- (ii) furthering the advancement of learning and conduct of research in fisheries, ocean studies and allied subjects;
- (iii) undertaking extension education programmes;
- (iv) to formulate new courses and curriculum in Fisheries and Ocean Studies sector in accordance with the technical advances in the respective fields;
- (v) to act as nodal agency to establish relationship with Institutions and Universities functioning in national and international level;
- (vi) to act as a centre of excellence having leading role for Human Resources Development in Fisheries and Ocean Studies sectors;
- (vii) to foster and encourage entrepreneurship in fisheries and ocean studies sector;
- (viii) to develop breeds and hybrids of ornamental fishes, prawns and oysters having features like production capacity, resisting power and good quality suitable to the environment of Kerala;
- (ix) to develop farming practices, fish feeds, fish disease control, resistant and vigilant steps suitable to the sustainable farming of ornamental fishes;
- (x) to preserve the fish bio-diversity of Kerala, to establish their intellectual property right to develop and utilize the possibilities of new technology like bio-technology;
- (xi) to conduct study and to record and preserve the study results relating to traditional fish technology, traditional knowledge, sustainable fish protection and to foster development;
- (xii) to strengthen research on fishing and related habitat and the relevant environmental factors; and
- (xiii) such other purposes as the University may deem necessary from time to time.

ORGANIZATION AND GOVERNANCE

ORGANIZATIONAL CHART

The University is headed by the Vice Chancellor. The other officers of the University are the Pro Vice Chancellor, Registrar, Finance Officer, Controller of Examinations, Director of Research, Director of Extension, School Directors, University Engineer and University Librarian. The Governing Council is the supreme authority of the University, and the members of the Council are nominated by the Chancellor for a period of three years.

THE ORGANIZATIONAL CHART GIVEN BELOW GIVES AN OVERALL PICTURE OF THE SET UP



FUNCTIONING

The process involved in decision making starts at the level of the Department Governing Council. All permanent teachers of the concerned department are the members of the department governing council.

The Department Government Council shall design the syllabus and make proposal regarding the courses of study in the Department to the School Governing Council.

The Department Governing Council shall meet at least once in a month or as and when required to review the academic activities and to suggest need based curricular changes.

The School Governing Council functions above the Department Governing Council.

The Director shall carry out the decisions of the School Governing Council and co-ordinate the functions of the departments in the best interest of the School and the University.

The School Governing Council shall prescribe the qualifications of the examiners and approve the panel of examiners for external examinations.

The Director shall propose examiners for the conduct of external examinations.

The School Governing Council shall meet at least once in three months or as and when required to review the academic activities and to take decisions on need based curricular activities.

The School Governing Council shall have adequate financial powers for the functioning of the various departments under the School including power for strengthening the infrastructure, improving the teaching and research facilities and for maintaining and operating research vessel, if any.

Without prejudice to the provisions in sub-clauses mentioned above, the School Governing Council shall have the following additional powers, namely:-

- a) to propose the courses of studies in the institutions maintained by the University;
- b) to propose the qualifications of teachers in Schools and other institutions maintained by the University;
- c) to propose the qualifications of students for admission to the various courses of studies and to the examinations and the conditions under which exemptions may be granted;
- d) to make proposal for instruction and training in such branches of learning as it may think fit;
- e) to make proposal for the institution of Professorships, Readerships, Lectureships and other teaching and research posts required by the University;
- f) to propose schemes for the constitution or reconstitution of departments for teaching, research and extension education based on the proposals received from the Department Governing Council;
- g) to exercise such other powers and perform such other functions as may be conferred or imposed on it by the Act and Statutes, Ordinances and Regulations made thereunder.

The Research Council: Research Council shall consist of the following members, namely:

- (i) Director of Research who shall be the Chairman of the Council.
- (ii) Directors of all Schools;
 - (iii) One senior faculty member who is a recognized guide from each School nominated by the Vice Chancellor;
 - (iv) Director of each Regional Centre;

- (v) One representative of Indian Council of Agriculture Research;
- (vi) One representative of MOES;
- (vii) One representative of fishery industry nominated by the Vice Chancellor; and
- (viii) The Vice Chairman of the Planning Board, Government of Kerala or representative of the Board nominated by him.

(2) Research Council shall be responsible for formulating research policies, identifying thrust areas, advising possible funding agencies and monitoring and reporting the progress and quality of research to the Vice Chancellor from time to time.

The Academic Council

Subject to the provisions of this Act and Statutes, the Academic Council shall have the following powers, duties and functions.

- (a) To advise the University Governing Council on all academic matters;
- (b) Make regulations and to amend or repeal the same;
- (c) Approve the courses of studies in the institutions maintained by the University;
- (d) Approve the qualifications of teachers in schools and other institutions maintained by the University;
- (e) Approve the qualifications of students for admission to the various courses of studies and to formulate conditions under which exemptions may be granted;
- (f) Consider and approve proposals for the instruction and training in such branches of learning as it may think fit;
- (g) Consider and approve proposals for the institution of post of Professors, Associate Professors, Assistant Professors, Readers, Lectures and other teaching and research posts, required by the University;
- (h) Approve proposals for determining the degrees, diplomas and other academic distinctions that shall be granted by the University;
- (i) Decide which examinations of other Universities may be accepted as equivalent to those of the University and to negotiate with other Universities for the recognition of the examinations of the University;
- (j) Approve, modify or revise schemes for the constitution or reconstitution of departments for teaching, research and extension education based on the proposals received from the School Governing Council;
- (k) Maintain standards regarding post graduate teaching, research and extension education;
- (l) Give advice to the University in all academic matters and to submit feasibility report before the Governing Council regarding the academic programmes as recommended by the Senate in its annual meeting;
- (m) Exercise such other powers and perform such other functions as may be conferred or imposed on it by the Act and Statutes, Ordinances and Regulations made there under.

The GC and the Senate are the supreme decision making bodies in the University

4.1. CAMPUSES OF KUFOS



The campus at Panangad lies on the western side and eastern side of the National Highway .The total area of this campus is 87.73 acres.It includes the already developed area in which the administrative building, academic block, the quarters, hostels etc are located. Major portion of the campus is occupied by fish ponds and natural mangrovevegetation. The campus is bordered on the western side by the Vemband backwater system.

4.1.2.FISHERIES STATION, PUDUVEYPU



The Fisheries Station is situated in Puthuveypu in the Vypeen island on the north-western bank of Cochin barmouth, It is at a distance of about 2 km from Vypeen-Pallippuram road and about 15 km away from the main campus. The Arabian sea on the west, the Cochin barmouth on the south and a canal emerging from the barmouth in the east form its main boundaries. On the northern side, the station joins the land proper of the main island. The Typical mangrove associations are characteristic of the area. This low lying area is subjected to the tidal influence of Cochin barmouth. The unique geographical position bestows on the station to embark on different aspects of fisheries research to open up new vistas. Major activities of this Station are teaching, research and extension. This Station also gives practical training in brackish water fish farming to B.F.Sc. and M.F.Sc. students of the University. The farm area is marshy, being daily inundated by saline and brackish water intrusions. Approved research programmes on commercially important fishes, shrimps and ornamental fish are being implemented. In addition, many awareness programmes are also given to entrepreneurs. The Station is also a centre for various varieties of mangrove and associated vegetation. The campus is covered by natural mangrove vegetation comprising about 18 acres and ponds. Administrative block, laboratory, hatchery etc. are located near the entry point of the campus.

4.1.3 Kannur Regional Centre , Payyanur

The University decided to start two regional centres one at north Kerala and another in the south Kerala. Accordingly university submitted plan proposals for the establishment of Fisheries Training, Extension and Research Centre at Kollam and Establishment of Aquaculture Training, Extension and Research Centre at Kannur during the year 2017-18. An amount of Rs 100 lakhs was allotted for each centre by the Government. On the basis of the request from Shri C. Krishnan, respected Member of Legislative Assembly representing Payyanur in the Kerala Assembly and Shri T.Purushothaman, President, kerala Aquafarmers Federation the Univeristy constituted a high level committee consisting of Dr K.Padma kumar, Pro Vice Chancellor, KUFOS as Chariman, Dr Suresh Kumar, GC Member, Shri Joby George, Finance Officer and Shri Jayakrishnan, University Engineer as members to inspect various places at Payyanur for the establishment of the Centre. The committee visited various locations in and around Payyanur and recommended establishment of the centre at Kandankali near Payyanur, The Univeristy requested the government to acquire the necessary land for the purpose.. Dr K.Padmakumar, Pro VC who was appointed as the special officer for the regional centre was relived from duties on 30/12/2017. The 50th Governing Council meeting held on 22nd December 2017 decided to appoint Dr.B.Manoj kumar, Associate Professor as the special officer. The committee for the centre was reconstituted with Dr S,Suresh kumar, Director, SOST, Shri Joby George, Finance Officer, Shri Jayakrishnan P.S, University and Dr B.Manoj kumar, Special Officer. This committee was authorized to make visits to suitable sites and also to identify suitable buildings for functioning of the Centre. An individual offered 10 acres of land free of cost for the establishment of the Centre at Payyanur. A committee consisting of Shri A.M,Shamseer, MLA and GC, Member, Dr S.Suresh Kumar, Professor and GC member, Dr S.M..Raffy, Assistant Professor and GC member and Shri Jayakrishnan P.S. University Engineer as convenor was constituted by the Vice Chancellor for inspecting the land. The committee inspected the land and found it unsuitable as it is a wet land and full of mangroves and the University will not be able to take up construction activity in that area. The Centre started functioning from **01/03/2018** in a rented building at Payyanur.

4.1.4. REGIONAL STATION, THIRUVALLAM

The State Government has allocated 10 acres of land at Thiruvallam for the setting up of a Regional Research Station. Infrastructural facilities proposed at Thiruvallam campus as per the Master Plan submitted by KITCO are under consideration and will be implemented in a phased manner.

5. ADMINISTRATION

The Vice-Chancellor is the Chief Executive Officer and the Registrar is the administrative head of the university. The Governing Council is the supreme authority of the University and that is supported by the Senate, Academic Council, Research Council, School Governing Council and Department Governing Councils. The day-to-day administration is carried out by the office of the Registrar under whom the Finance Officer, responsible for the financial management of the University functions. On the research side, the Directorate of Research, and on the extension side the Directorate of Extension coordinate the respective activities. Conduct and evaluation of examination and allied activities are vested with the Controller of Examinations. Academic activities related to the different Schools are controlled by the School Directors under whom the various Departments with the Heads of Departments function.

- KUFOS started functioning on 01.04.2011 with its Head Quarters at Panangad.
- The logo of KUFOS was released by Sri. K. Babu, the then Minister of Fisheries, Port & Excise, Govt. of Kerala, in a function organised at KUFOS on 20.06.2011.
- Two day National Consultative Workshop for Preparation of Vision Document and Strategic Plan of KUFOS was inaugurated by Sri. K. C. Venugopal, the then Union Minister of State for Power at International Hotel, Ernakulam on 28.07.2011. Dr. E. G. Silas, Former Vice Chancellor of

Kerala Agricultural University launched the new website of the University during the function.

- The first Governing Council meeting of KUFOS was held on 28.03. 2012 at Thycaud Guest House, Thiruvananthapuram.
- The Certificate distribution function to distribute Provisional B F Sc Degree Certificates to the 2007 batch students, were held during the function. Sri. K. Babu, the then Hon'ble Minister of Fisheries & Ports had distributed the certificates.

5.3.1 STATUTORY OFFICERS

Prof.(Dr.) A.Ramachandran	Vice Chancellor
Prof. (Dr.) K Padmakumar	Pro Vice Chancellor
Dr V M Victor George	Registrar
Dr.K.P.Subhashchandran	Controller of Examinations (In-charge)
Dr. K Gopakumar	Dean, Faculty of Fisheries
Dr M.R.Boopendranath	Dean, Faculty of Ocean Science and Technology
Dr.K.Vasudevan	Dean, Faculty of Ocean Engineering
Prof. (Dr.) N.R.Menon,	Dean, Faculty of Climate Variability and Aquatic Ecosystem
Dr.S.Harikumar	Dean, Faculty of Management, Humanities and Social Sciences Dean, Faculty of Fisheries
Sri Joby George P	Finance Officer.
Dr.T.V.Sankar	Director of Research
Dr. Daisy C Kappen	Director of Extension (i/c)
Sri. P.S.Jayakrishnan	University Engineer

AUTHORITIES OF THE UNIVERSITY

The following are the authorities of the University

1. the Senate
2. the University Governing Council
3. the Academic Council
4. the Research Council
5. the School Governing Councils
6. the Department Governing Councils
7. the Faculties; and such other bodies as may specified by the Statutes.

Senate

The Kerala Government constituted the first Senate of the University as per Section 76 of KUFOS Act 5 of 2011. As per Section 10 of KUFOS Act, the Senate consists of Ex-officio Members (10 Nos.), Nominated Members (24 Nos.) and Elected Members (13 Nos.). The term of the Senate is five years from the date of its constitution by the Chancellor and the Chancellor shall reconstitute the Senate on expiry of its term. Senate shall meet at least twice a year on dates to be fixed by the Vice Chancellor and one of such meetings shall be called the annual meeting.

Members of Senate

- 1 The Principal Secretary to the Governor of Kerala, Kerala Raj Bhavan Thiruvananthapuram
- 2 Private Secretary to the Minister Fisheries and Harbor Engineering Room No: 532, 3rd Floor, South Sandwich Block Secretariat, Thiruvananthapuram
- 3 Adv. M.Swaraj MLA Tripunithura Assembly Constituency Tripunithura
- 4 Secretary to Govt. Fisheries Department Govt. Secretariat Thiruvananthapuram
- 5 Secretary to Govt. Higher Education Department Govt. Secretariat Thiruvananthapuram
- 6 Secretary to Govt. Finance Department Govt. Secretariat Thiruvananthapuram
- 7 Law Secretary to Govt. of Kerala Govt. Secretariat Thiruvananthapuram
- 8 Director of Fisheries Government of Kerala Vikas Bhavan Govt. Secretariat Thiruvananthapuram
- 9 Dr. K Gopakumar Dean, Faculty of Ocean Science and Technology
- 10 Dr. K Vasudevan Dean, Faculty of Ocean Engineering B1015, Satellite Township Kakkanadu, Kochi 682030
- 11 Dr. M R Bhoopendranath Dean, Faculty of Fisheries 18/1990-B "Manjusha", No. 10, 2nd Lane, Pratheeksha Nagar, Thoppumpady, Cochin-682005, Kerala
- 12 Dr. Devika Pillai Dept. of Aquatic Animal Health Management
- 13 Dr. K Dinesh Dept. of Aquaculture
- 14 Dr. M K Sajeevan Dept. of Fisheries Resource Management
- 15 Dr. K Ranjeet Dept. of Aquatic Environment Management
- 16 Sri. Mathew Sebastian Dept. of Fisheries Extension and Statistics
- 17 Dr. C D Suriyakala, Director School of Ocean Engineering and Underwater Technology
- 18 Sri. Arun Kumar M S Mannathumpatu House, Kallinmel P O, Mavelikkara, Alappuzha
- 19 Sri. P Vasudevan Arupathunazhi House, Vakirim Sulthanbathery, W
- 20 Adv. P K Khaleemuddeen Fathima Bhavan, Ponnani, Malappuram
- 21 Dr. V. Gabriel V M bhavan, Puthiyathura, Pulluvila PO Thiruvananthapuram- 695526
- 22 Smt. Vanaja K Sreelekshmi, Elambichi, Thrikkariapur, Kasargode
- 23* Sri. T Peter Udayam, Valkiya Veli PO, Thiruvananthapuram
- 24 Sri. T Manoharan Manappattu, Neendakara PO, Chavara, Kollam
- 25 Sri. Sudheer M P Nayarassery House, Edavanakkad PO, Ernakulam
- 26 Adv. M K Uthaman Manappurathu House, Manappuram PO, Cherthala
- 27 Sri. B Sathyan, MLA Boys Land, ANRA 21A, Mattada, Thiruvananthapuram
- 28 Sri. K Dasan MLA Nikunjam, Muchukunnu PO, Kozhikode
- 29

Governing Council

As per letter No. GS 5-957/2011 dated 19.03.2012 of His Excellency the Governor of Kerala and Chancellor of KUFOS, the first University Governing Council was formed in accordance with the provisions contained in Section 76 of KUFOS Act 5 of 2011. The Governing Council is the supreme authority of the university and comprises of 23 members from among the category of Ex-officio Members (11 Nos.), Elected Members (4 Nos.) and Nominated Members (8 Nos.). At the outset, the Govt. have formed the KUFOS Governing Council by nominating 16 members. The University Governing Council shall be reconstituted every four years. The Governing Council shall meet at least once in a month on dates to be fixed by the Vice Chancellor after giving due notice to all members.

Members of the Governing Council (2016-2017)

The Vice Chancellor, KUFOS

Prof.(Dr.) A Ramachandran

0484 2703781 (Direct),
2700598, 2700964 ,
Fax:-91 484 2700337
vc@kufos.ac.in

Pro Vice Chancellor,
KUFOS

Prof.(Dr.) K Padmakumar

0484 2700596
pvc@kufos.ac.in

Secretary to Govt. of Kerala,
Fisheries Department, Govt. Secretariat,
Thiruvananthapuram

0471-2321129
0471-2333115 (Fax)
Prlsececy.port@kerala.gov.in

The Secretary to Govt. of Kerala
Higher Education Department,
Govt. Secretariat Thiruvananthapuram

(Mobile)
Fax – 0471-2332245
sec.higheredu.kerala@gmail.com

The Secretary to Govt. of Kerala
Finance Department
Govt. Secretariat Thiruvananthapuram

Tel.0471-2518292, 2327586
Fax 0471-2326990
prlsececy.fin@kerala.gov.in

The Law Secretary to Govt. of Kerala
Govt. Secretariat Thiruvananthapuram

Telephone – 0471-2518383
Fax-0471-2332955
secy@law.kerala.gov.in

The Vice President of
KeralaState Council for Science and
Technology and Environment
Sastra Bhavan, Pattom, Thiruvananthapuram.

Tel.No. 0471- 2548200, 0471-2540085
mailto@kscste.org

Adv A.M.Shamseer MLA
Ameenass, PO Paral
Thalassery-670671`

Tel No-9447056803
Amshamseer2@gmail.com

E.T.Taison MLA
Kaipamangalam. ElanjikalKannathupadikkal
Kera PO, Kodungallur

Tel No-9846958317
Taisonthomas74@gmail.com

Dr. A.Gopalakrishnan
Director
CMFRI, Kochi

Tel No 0484 2394867
director@cmfri.org.in

Dr.N.R.Menon
Dean, Faculty of Climate
Vaiability and Aquatic Ecosystem, KUFOS

Tel No : 9847064322

Dr.M.R.Boopendranath
Dean, Faculty of Ocean Science and Technology
KUFOS

Tel No: 9447665875

Dr.M.S.Raju
Director, MSE, KUFOS

Tel No : 9447919151
msraju01@yahoo.com

Dr.S.Sureshkumar
Professor,
School of Ocean Science & Technology, KUFOS
Tel No : 9447508065
suresh.kufos@gmail.com

Dr.|Anu Gopinath
Asst Professor, School of Fisheries Resource
Management & Harvest Technology, KUFOS

Tel No : 9446838319
anugowri@hotmail.com

Dr.S.M.Raffi
Asst Professor, School of Fisheries Resource
Management & Harvest Technolgy, KUFOS

Tel No : 9497393516

C.D.Suriyakala
Director, School of Ocean Engineering and
Under Water Technology, KUFOS

Tel No : 8281326577
dr_soeut@kufos.ac.in

Sri K.K.Raghuraj
Kannappassery
Njarakkal,Ernakulam

Tel No : 9446684355
reghuraj42@gmail.com

Sri Vidhu Rajan R
BFSC 2014 Batch Student, KUFOS

Tel No : 9605738907
vidhurajan5721@gmail.com

Dr.S.S.C.Shenoi
Director, INCOIS, Hyderabad-500090

Tel No : 9441013377
director@incois.gov.in

Sri Manu C Pulikkal
Vayalar P.O.
Cherthala- 688536

Tel No : 9447473349
manupilikkal@gmail.com

Sri Basillal
Shalom, Convent Road
Thankassery, Kollam

Tel No : 9446488320
Basillalhubert23@gmail.com

Sri Abraham John Tharakan
Shibumi, 11/814
Elphinistin Road
Fort Kochi

ajt@amalgamfoods.in

10 meetings of the Governing Council were held during 2017-18 Financial Year

Major Decisions of the Governing Council during the period

Academic Council

The Academic Council shall have general control over the academic matters of the University and be responsible for the maintenance of standards of instruction, education and examinations within the University and shall exercise such other powers and perform such other functions as may be conferred or imposed upon it by the Statutes. The Academic Council consists of 24 members from various realms. The Govt. constituted the first Academic Council. The following are the academic council members. 11 meetings have been conducted so far.

ACADEMIC COUNCIL MEMBERS

The Vice Chancellor, Chairperson	Prof.(Dr.) A.Ramachandran	0484 2703781 (Direct), Fax:-91 484 2700337
Director of Fisheries		0471-2303160 0471-2304355(Fax)
Director of CMFRI		0484-2394798
Director of CIFT		0484-2666880
Director of CMLRE		0484-2427790
Director of NIO		0484-2390814
Director of School of Fishery Environment & Head of Aquatic Animal Health Management	Dr. Devika Pillai	9446111033
Associate Professor and Head of Department of Processing Technology	Dr B.Manojkumar	9447525232
Director of School of Mgt. & Entrepreneurship	Dr. M.S. Raju	0484-2700598(Extn)30
Director of School of Ocean Engineering and Underwater Technology	Dr. C.D.Suriyakala	8281326577
Asst Professor, Department of Aquaculture	Dr.Binu Varghese	9447501644
Associate Professor and Head, Department of Aquaculture	Dr. K. Dinesh	9446032977
Associate Professor and Head, Department of Fisheries Resource Management	Dr.M.K.Sajeevan	9969651349
Asst Professor, Department of Aquatic Food Product and Technology	Dr.Safeena M.P	9995203185

Associate Professor, School of Management and Entrepreneurship	Smt.Alph Korath	9497793911
Associate Professor and Head, Department of Fisheries	Shri Mathew Sebastian	9495395305
Extension & Statistics Students representatives	Akshaya Vijayan (FRM-2017)	9746429259
	Ignatious Joseph (OST-2017)	7736460636

Research Council

The Research Council is responsible formulating research policies, identifying thrust areas, advising possible funding agencies and monitoring and reporting the progress and quality of research to the Vice Chancellor from time to time. The Research Council shall meet at least once in six months. Research Council has not yet been constituted during the reporting period.

OFFICERS OF THE UNIVERSITY

As per Section 30 of KUFOS Act 5 of 2011, the following shall be the Officers of the University.

- i) the Chancellor
- ii) the Pro-Chancellor
- iii) the Vice Chancellor
- iv) the Pro Vice Chancellor
- v) the Deans
- vi) the Registrar
- vii) the Finance Officer
- viii) the University Engineer
- ix) the Librarian
- x) the Director of Research
- xi) the Director of Extension
- xii) the Controller of Examinations
- xiii) the Directors of Schools
- xiv) Heads of Departments

And such officers in service of the University as may be prescribed in the Statutes.

FACULTIES

There are five Faculties established in the University. The Faculties shall be the principal academic co-ordination authorities of the University in respect of studies and research in the subjects included on the Faculty and also in respect of studies and research in multi-disciplinary faculties. KUFOS has five Faculties and each Faculty comprises of the Dean, the Chairpersons of all Boards of Studies comprised in the Faculty, one member of each Board of Studies to be elected by the members of Boards of studies from among themselves out of whom at least one shall be a Post Graduate teacher and two subject experts preferably from outside the State, nominated by the Vice-Chancellor. The Dean shall be the Chairman of the Faculty. Various faculties were constituted as per the university order No.GA6/2265/15 dated 01.12.2015



I Faculty of Fisheries

Dean - Dr.K.Gopakumar, DDG (Fisheries) Rtd., ICAR, Professor of Eminence, KUFOS

Chairperson of all Board of studies comprised in the Faculty

1. Chairperson of Board of Studies of Dept. of Aquaculture and Biotechnology — Member
2. Chairperson of Board of Studies in Aquaculture Nutrition and Feed Technology - - Member
3. Chairperson of Board of Studies in Aquatic Animal Health Management Member
4. Chairperson of Board of Studies in Fisheries Resource Management –Member
5. Chairperson of Board of Studies in Fishery Hydrography - Member
6. Chairperson of Board of Studies in Preservation & Packing Technology – Member
7. Dr.T.V.Sankar, Director of Research, KUFOS
8. Dr.Suresh Kumar, Professor, Fishery Hydrography, KUFOS (Board of Studies Nutrition and Feed Technology) - Member
9. Dr.Mohamed Hatha, Professor and Head, Dept. of Marine Biology, CUSAT (Board of Studies : Aquatic Animal Health Management) - Member
10. Dr.K.Madhu, Principal Scientist, CMFRI, Kochi (Board of Studies ; Aquaculture & Biotechnology) - Member
11. Dr.K.Mohankumar Prof. Dept.of Meterology, CUSAT, Kochi (Board of Studies: Fishery Hydrography) - Member
12. Dr.Shivananda Murthy, Professor and Head, Dept. of Aquaculture, College of Fisheries, Mangalore - Member



II Faculty of Ocean Science and Technology

Dean – Dr.M.R.Boopendranath ,Principal Scientist (Rtd), CIFT ,

Chairperson of all Board of studies comprised in the faculty

1. Chairperson of Board of Studies in Applied Geo Science Member
2. Chairperson of Board of Studies in Biological Oceanography Member
3. Chairperson of Board of Studies in Physical Oceanography and Ocean Modeling –Member
4. Chairperson of Board of Studies in Food Science & Technology Member
5. Chairperson of Board of Studies in Marine Microbiology - Member
6. Chairperson of Board of Studies in Biotechnology and Bioinformatics - Member
7. Dr.T.V.Sankar, Director of Research, KUFOS
8. Dr.Kamalakshan, Kokkal, Joint Director, KSCSTE, Sasthra Bhavan (Board of Studies Geoscience) - Member
9. Dr.L.Harenduprakash, Director (Board of Studies in Physical Oeanography and Ocean Modeling)- Member
10. Dr.S.Girija, Director NIFPHATT, Kochi 17 (Board of Studies Food Science and Technology) - Member
11. Dr.K.V.Lalitha, Principal Scientist, CIFT, Kochi (Board of Studies Marine Microbiology) - Member

12. Dr.C.Justin David, Academic Consultant, Dept.of Biotechnology and Bioinformatics, KUFOS (Board of Studies Biotechnology and Bioinformatics) - Member
13. 14. Dr.Baban Ingole, Scientist F., NIO, Goa - Member



III Faculty of Ocean Engineering

Dean – Dr. K.Vasudevan, Emeritus Professor, Dept of Electronics, CUSAT

Chairperson of all Board of studies comprised in the faculty

1. Chairperson of Board of Studies of Remote Sensing Technology & GIS – Member
2. Prof.Sasikumar, Course Professor and Co-ordinator of PG Programme, K.M., School of Marine Engineering, CUSAT Cochin – 22 - Member
3. Prof.V.Sundar, Dept.of Ocean Engineering, IIT, Chennai - Member



IV Faculty of Climate Variability and Aquatic Ecosystem

Dean - Prof.N.R.Menon, Professor Emeritus, Dept. of Marine Biology, Microbiology and Biochemistry, CUSAT, Kochi -16 - Chairman

Chairperson of all Board of studies comprised in the faculty

1. Chairperson of Board of Studies in Coastal Zone Management - Member
2. Chairperson of Board of Studies in Disaster Management - Member
4. Dr.Ramesh, Director, National Centre for Sustainable Coastal Management, Koodal Building, Anna University, Chennai -25 - Member
5. Dr.K.V.Thomas, Scientist F & Head of Marine Science (Rtd.), National Centre for Earth Science Studies, Thiruvananthapuram - Member



V Faculty of Management, Humanities and Social Sciences

Dean S.HARIKUMAR, Professor and Head, Department of Applied Economics, CUSAT

Chairperson of all Board of studies comprised in the faculty

1. Chairperson of Board of Studies in Economics & Statistics Member
2. Chairperson of Board of Studies in Legal Studies - Member
3. Chairperson of Board of Studies in Business Administration & Management - Member
4. Prof.K.R.Muraleedharan Nair, Former Dean, Faculty of Statistics, Cochin University of Science and Technology (Board of Studies ; Economic and Statistics) - Member
5. Dr.K.B.Balakrishnan, Associate Professor, NUALS, Kochi (Board of Studies ; Legal Studies) - Member
6. Prof. P. Sudarsanan Pillai, former Dean (CUSAT) (Board of Studies ; Business Administration and Management) - Member
7. Dr.P.T.Sreenivasan, Former Head, Dept. of Management Studies University of Madras - Member

Academic Programmes

KUFOS offers two under Graduate Programmes-B.F.Sc and B.Tch-Food Technology , 34 Post Graduate Programmes in various subjects and Ph.D Programmes in subjects related to Fisheries, Ocean Studies and Management under

- I. Faculty of Fisheries
- ii. School of Management and Entrepreneurship
- iii. School of Ocean Science and Technology
- iv. School of Fishery Environment and
- v. School of Ocean Engineering

Courses Offered

B.F.Sc

M.F.Sc

- a) M.F.Sc. Aquaculture
- b) M.F.Sc. Aquatic Animal Health Management
- c) M.F.Sc. Aquatic Environment Management
- d) M.F.Sc. Fish Nutrition and Feed Technology
- e) M.F.Sc. Fish Processing Technology
- f) M.F.Sc. Fisheries Engineering and Technology
- g) M.F.Sc. Fisheries Resource Management

MSc

- a) M.Sc. Biotechnology
- b) M.Sc. Climate Science
- c) M.Sc. Disaster Management
- d) M.Sc. Earth Sciences
- e) M.Sc. Environmental Sciences
- f) M.Sc. Food Science and Technology
- g) M.Sc. Marine Biology
- h) M.Sc. Marine Chemistry
- I) M.Sc. Marine Microbiology
- j) M.Sc. Physical Oceanography
- k) M.Sc. Remote Sensing and GIS
- l) M.Sc. Statistics

MBA

- a) MBA dual specialisation (Finance/ Marketing/ Human Resource Management/ Rural Management / Fisheries Business Management)
- b) MBA Energy Management

M.Tech.

- a) M.Tech. Integrated Coastal Zone Management
- b) M.Tech. Ocean and Coastal Safety Engineering
- c) M.Tech. Coastal and Harbour Engineering

B.Tech- Food Technology

LLM

- a) LLM (Maritime Law)

DIPLOMA

- a) PG Diploma in Aquarium Science and Technology
- b) PG Diploma in Industrial Aquaculture
- c) Diploma in Brackish water and Marine Aquaculture

Ph.D. PROGRAMMES

Doctoral degree programmes leading to Ph.D. are being offered by the five Faculties. The Faculties are

- a) Faculty of Fisheries
- b) Faculty of Ocean Science and Technology
- c) Faculty of Ocean Engineering
- d) Faculty of Climate Variability and Aquatic Ecosystem
- e) Faculty of Management, Humanities and Social Sciences

Post Doctoral Fellowship (PDF) Programmes

Offered by the five faculties. The faculties are

- a) Faculty of Fisheries
- b) Faculty of Ocean Science and Technology
- c) Faculty of Ocean Engineering
- d) Faculty of Climate Variability and Aquatic Ecosystem
- e) Faculty of Management, Humanities and Social Sciences

Degree Programmes (Admitted through NEET/KEAM)

- a) Bachelor of Fisheries Science (BFSc.)
- b) B.Tech. (Food Technology)

10. Certificate Programme

- a) Certificate course on Computer Aided Designing and Drafting (CADD)
- b) Certification Programme on Entrepreneurship Development

DIRECTORS OF VARIOUS SCHOOLS

Sl.No.	Name	School
1.	Dr.Devika Pillai (i/c)	School of Fishery Environment
2.	Dr.S.Suresh Kumar, Professor& Director (i/c)	Ocean Science & Technology
3.	Dr.M.S.Raju	Management and Entrepreneurship
4.	Dr.C.D.Suriyakala	School of Ocean Engineering and Underwater Technology

Staff Details

- a. Section wise details of
(I) Teaching staff (Regular, Academic Consultants, Professor of Eminence, Contract & Guest)

HEADS OF DEPARTMENTS

Sl. No.	Name & Designation	Department
1.	Dr.K.Dinesh, Associate Professor	Dept.of Aquaculture
2.	Dr.B.Manokumar, Associate Professor	Dept.of Fish Processing Technology
3.	Dr.Devika Pillai, Professor	Dept.of Aquatic Animal Health & Mgt.
4.	Dr.M.K.Sajeevan, Associate Professor	Dept.of Fisheries Resource Management
5.	Dr.V.K.Venkitaramani, Academic Consultant	Dept.of Biological Oceanography and Biodiversity
6.	Dr.V.K.Venkitaramani, Academic Consultant	Dept.of Biotechnology
7.	Dr.V.K.Venkitaramani, Academic Consultant	Dept.of Coastal Zone Management
8.	Dr.Prasada Rao, Academic Consultant.	Dept.of Physical Oceanography and Ocean Modeling .
9.	Dr.S.Rajendran, Academic Consultant.	Dept.of Applied Geoscience
10.	Dr.S.Rajendran, Academic Consultant.	Dept.of Remote Sensing Tech.&GIS
11.	Dr.S.Rajendran, Academic Consultant.	Dept.of Disaster Mgt.
12.	Dr.K.Gopakumar, Prof.of Eminence	Dept.of Food Science & Technology
13.	Dr.V.Ambilikumar, Associate Professor	Dept.of Business Administration and Management

Regular Teachers working in various Departments

Sl. No.	Name & Designation	Discipline	School
1	Dr. M.S. Raju Prof. & Director of School	Economics	Management Studies and Entrepreneurship
2	Dr. S. Shyama, Professor	Aquaculture	School of Aquaculture and Biotechnology
3	Dr.V. Ambilikumar Asso Professor	Business Management	Management Studies and Entrepreneurship
4	Dr.S. Suresh Kumar Professor	Biological Oceanography	Fisheries Resource Management and Harvest Technology
5	Dr. Devika Pillai, Associate Professor	Aquaculture	School of Aquaculture and Biotechnology
6	Dr.B. Manoj Kumar Associate Professor	Fishing Technology	Fisheries Resource Management and Harvest Technology

7	Dr. Daisy C. Kappan Associate Professor	Fishery Extension	Management Studies and Entrepreneurship
8	Sri.Mathew Sebastian Associate Professor	Statistics	Management Studies and Entrepreneurship
9	Smt. V. Malika Associate Professor	Statistics	Management Studies and Entrepreneurship
10	Smt. Alphy Korath Associate Professor	Fishery Statistic	Management Studies and Entrepreneurship
11	Dr. K. Dinesh Assoc. Professor	Aquaculture	Fisheries Resource Management and Harvest Technology
12	Dr. Ranjeet K. Associate Professor	Biological Oceanography	Fisheries Resource Management and Harvest Technology
13	Dr M. K. Sajeevan Associate Professor	Fishery Biology	Fisheries Resource Management and Harvest Technology
14	Dr. K.R.Salin Assistant Professor	Aquaculture	Fisheries Resource Management and Harvest Technology
15	Dr. Anu Gopinath Assistant Professor	Chemical Oceanography	Fisheries Resource Management and Harvest Technology
16	Smt. Safeena M.P. Assistant Professor	Microbiology	Aquatic Food Products and Technology
17	Dr. Blossom K.L. Assistant Professor	Food Science & Nutrition	Aquatic Food Products and Technology
18	Dr. Prabhakaran M.P. Assistant Professor	Fisheries Oceanography	Fisheries Resource Management and Harvest Technology
19	Dr. Chiranjiv Pradhan Assistant Professor	Fish Nutrition	School of Aquaculture and Biotechnology
20	Dr. Punnedath Preetham Assistant Professor	Biochemistry	Aquatic Food Products and Technology
21	Dr. S.M. Rafi Assistant Professor	Biological Oceanography	Fisheries Resource Management and Harvest Technology
22	Dr. K Jayalakshmi Assistant Professor	Fish Biology	Fisheries Resource Management and Harvest Technology
23	Dr. Rajeev Raghavan Assistant Professor	Fish Taxonomy	Fisheries Resource Management and Harvest Technology
24	Dr. Linoy Libini Assistant Professor	Aquaculture	School of Aquaculture and Biotechnology
25	Dr. Abhilash Sasidharan Assistant Professor	Fish Processing	Aquatic Food Products and Technology
26	Dr. Binu Varghese Assistant Professor	Fish Breeding	School of Aquaculture and Biotechnology
27	Dr. Rejish Kumar Assistant Professor	Aquaculture	School of Aquaculture and Biotechnology
28	Dr. Swapna P. Antony Assistant Professor	Fish Pathology	School of Aquaculture and Biotechnology
29	Dr. Pramila S. Assistant Professor	Fishery Biology	Fisheries Resource Management and Harvest Technology
30	Dr. Anwar Ali P.H. Assistant Professor	Fishery Biology	Fisheries Resource Management and Harvest Technology
31	Dr. Mithun Sukumaran Assistant Professor	Aquaculture	School of Aquaculture and Biotechnology

Academic Consultants

Sl. No.	Name & Designation	Department	School
1	Dr. V.K. Venkataramani	Biological Oceanography	Ocean Science and Technology
2	Dr. G Sadasivan Nair	Maritime Law	School of Management and Entrepreneurship
3	Prof. S. Rajendran	Applied GeoScience	Ocean Science and Technology
4	Dr. C.V. K. Prasada Rao	Physical Oceanography	Ocean Science and Technology
5	Dr. Justin David	Biotechnology	Ocean Science and Technology
6	Dr. N. Rajendran	Microbiology	Ocean Science and Technology
7	Dr. Benny N. Peter	Coastal Zone Management	School of Ocean Engineering
8	P.T. Lakshmanan	Marine Chemistry	Ocean Science and Technology
9	Dr. K.V. Thomas	Disaster Management	School of Ocean Engineering

Professor of Eminence

Sl. No.	Name & Designation	Department	School
1	Dr. K. Gopakumar	Food Science & Technology	Ocean Science and Technology
2	Dr. K.S. Purushan	Pandit Karuppan Chair	School of Management and Entrepreneurship
3	Dr.D.D. Namboothiri	Food Science & Technology	Ocean Science and Technology

Teachers on contract basis

Sl. No.	Name & Designation	Department	School
1	Dr. Mariya T. Cheeran	Rural Management	Management Studies and Entrepreneurship
2	Dr.Sneha Susan Simon	Food Technology	Aquatic Food Products & Technology
3	Sri. Hamid Hussain. V	Fisheires	Fishery Environment
4	Dr. Suresh P.R.	Economics	Management Studies and Entrepreneurship
5	Sri. Mahesh J	Geosciences	Ocean Science and Technology
6	Dr.Rachanamol S.	Microbiology	Ocean Science and Technology
7	Dr.Raghul Subin. S.	Microbiology	Ocean Science and Technology
8	Sri.Sarath Prasanth S.V.	Geosciences	Ocean Science and Technology
9	Arun Kumar V.S.	Ocean Engineering	Ocean Engg. & Technology
10	Sri.Sreenal Sreedhar	Remote Sensing	„
11	Smt. Ashamol V.		Management Studies and Entrepreneurship
12	Mary Jisha Francis	Physical Oceanography	Ocean Sciences and Technology
13	Sandhya Lekshmi	Aquaculture	Aquaculture and Biotechnology
14	Sri. George Joseph	Human Resource Management	Management Studies and Entrepreneurship
15	Sri. Rajeeve G.K.	Marketing Management	Management Studies and Entrepreneurship
16	Sri. Shajeera K.A.	General Management	„School of Management and Enterprenuership
17	Smt. Sanu Jacob	Agricultural Post Harvesting Technology	„Faculty of Fisheries
18	Dr.Rachel Fernadez	Aquaculture	Faculty of Fisheries

Guest Lecturers

Sl. No.	Name	
1.	Anju K. Joshi	9. Nellengol Kavitha Karunakaran
2.	Praveen Kurian Thomas	10. Saranya P.
3.	George Basil	11. Renjith T.A.
4.	Dr. K.M. Mathew, Professor (Rtd.)	12. Adv. Jayaprakash
5.	Sri. Sudhir	13. Dr. V.N. Sanjeevan
6.	Dr. Rachel Fernandez	14. Sruthy Baby
7.	Dr. Sanu Jacob	15. Adv. Syam Kumar
8.	Sri. Ankur Nagori	16. Adv. Smitha Chathanarambath
		17. Dr. V.S. Sebastian
		18. Dr. Benjamin P.V.

(I) Non - teaching staff

Name & Designation

Section

GENERAL ADMINISTRATION

Sri.K.M. Mohammed, Deputy Registrar & P.S. to Vice Chancellor	Vice Chancellor's Office
Shri Cleetus P.J, Assistant Registrar	Administration,,
Sri. P.R.Sreekumar, Assistant Registrar	„Academic and Examination
Smt. Meera. T. M., Section Officer (FC& D)	Administration
Sri.Shaheer, Asst. Section Officer	„ Administration
Sri.Vijayshine. K. V, Asst. Section Officer	„Finance
Sri.K.K. Faizal, Asst. Section Officer	„ Administration
Sri.Muhammed Shanar, Asst. Section Officer	„ Administration
Smt. Ajitha T.C, O.S. (Hr. Gr.)	Administration
Smt. Litty Fernandez, Office Supdt.	Administration
Sr. T.M. Devassy, Asst. Section Officer	Fisheries Station, Puduveyypu
Sri. Raju Kurian. M, Asst. Section Officer	„Finance
Smt. Vinu C.V., Asst. Section Officer	„ Administration
Smt. Deepthi. V., Asst. Section Officer	„ Administration
Sri.Ajith Kumar K.L., Asst. Section Officer	„ Administration
Ms.Chandana Chandrasekharan, Assistant	Administration
Shri Akhil V.S.Assistant	Academic & Examination
Sri.Anu S, Assistant	Finance
Smt.Anusha P.V, Assistant	Academic & Examination
Smt. Dhanya, Typist Sr. Gr	„ Administration
Sri. C. Pradeep, Deputy Registrar	Finance
Sri.T.K. Deleep, Section Officer	„ Administration
Smt. Elizabeth Edward, Asst. Section Officer	„ Administration
Smt. Thressiamma John, Office Superintendent	Administration

Smt. Seema M.C., Sel. Gr. Computer Assistant	Academic
Smt. Dhanya, Sel. Gr. Computer Assistant	Administration
Smt. Priya M, Asst. Section Officer	„Administration
Sri. A.V. Thomas, Sel. Gr. Computer Assistant	„Registrar Office
Sri. Vijayan Office Superintendent	Office of Pro Vice Chancellor
Sri. N.B. Sudheer, Section Officer &PA to Registrar	Office of Registrar
Smt. Tessy K. Thomas, Computer Programmer	Computer Lab
Sri.Kunjumammed. V. S., Assistant Librarian	Library
Smt. P. V. Vijayalakshmi, Reference Assistant	Library
Smt. Ramya Raveendran, Technical Assistant	„
Smt. Padma Narayanapillai, Farm Superintendent	Farm Staff
Sri. K.K. Reghuraj, Farm Manager Gr. I	„
Smt. Bindumol Abraham, Farm Officer Sel. Gr.	„
Sri.K.K. Sreekumar, Pump Operator	„
Sri. P. M Beneesh	Lab Assistant
Smt. P. S. Surya	„
Smt. Rajamma K.M.	„
Sri. K. Surendran, HDV Driver	Transportation Wing
Sri. N.C., Jose, LDV Driver	„
Sri. A.T. Gheevarghese, LDV Driver	„
Smt.Girijamma G., Matron Sel. Gr.	Hostel
Sri.K.J. Jose, Dupli. Machine Operator Sr.Gr.	Office
Sri.Lineesh K.R.	Office Attendant
Sri. Arun K.J.	„
Sri. Renjith.A.R.	„
Smt.Sindhu Devi (On deputation)	„

Director of Public Relations and Publication – Shir Raju E Raphael (on contract)

(I) Contract staff –	External Aided Project / Plan Project		
1. Sri. Rajeeesh P.M.	Research Fellow	10. Smt. Syamala V.K.	„
2. Smt. Mekha Bose	Tech. Assistant	11. Smt. Remya L. Sundar	Research Fellow
3. Sri. Sanju K.	Research Fellow	12. Sri. S. Thiruvarasu	„
4. Smt. Resmi M.R.	Field Assistant	13. Smt. Maneeja Murali	„
5. Smt. Shiny Peter	„	14. Sri. Sreenath V.R.	Senior Research Fellow
6. Smt. Anju M.S.	„	15. Smt. Divya V. Haridas	„
7. Smt. Salini N.S.	„	16 Smt. Anu Remanan	Research Fellow
8. Smt. Henamol A.A.	„	17. Smt. Gilgi M.G.	Nursery Attendant
9. Smt. Hema A.A.	„	18. Smt. Surya A.B.	SRF
		19. Smt. Sreeja P.V.	Field Assistant

20. Sri. Vineeth kumar	„	Accountant
21. Smt. Gayathri P.V.	Project Scientist	SRF
22. Smt. Fejila Agnes	SRF	SRF
23. Smt. Sreeparvathy	SRF	SRF
24. Sri. Sam Peter	SRF	SRF
25. Sri. Vipin Das P.V.	SRF	SRF
26. Sri. Silesh M.S.	SRF	Project Scientist
27. Sri. Viji V.	SRF	SRF
28. Sri. Harish K.C.	SRF	SRF
29. Sri. Akhil P.B.	SRF	SRF
30. Smt. Divya A.S.	Tech. Asst.	Fieldman (F)
31 Smt. Rekha K.R.	Office Asst-cum-	
		32. Smt. Geeji M.T.
		33. Smt.Sneha K.G.
		34. Sri. RakeshC.G.
		35. Smt. Neenu Prakash
		36. Smt. Aswathy
		37. Dr. Elizabeth Carolin
		38. Smt. Devi.
		39. Sri.Arjunan
		40. Sri.Renjith
		41 Sri. Hareesh V.N.

(I)Daily wage staff

1	Sri. Babu Paul	Assistant, Academic
2	Smt. Reshma V.S.	„
3	Smt. Simi Sajeevkumar	„
4	Smt. Sunila M.	Assistant, Administration
5	Smt. Shamila P.H.	„
6	Smt. Sajila V.L.	„
7	Smt. Praveena A.P.	Assistant, Finance
8	Smt. Preetha V.N.	„
9	Smt. Sajila V.L.	„
10	Smt. Meharunnisa A.	„
11	Smt. Praveen C. Prasad	Assistant, Management Studies
12	Smt. Salini T.S.	Assistant, Processing Dept.
13	Smt. Bindhu P.P.	Assistant, SOST
14	Smt. Shabeera	Assistant, Directorate of Research
15	Smt. Sheela M.T.	Computer Assistant, Acad.
16	Smt. Sindhu K.S.	Class IV
17	Smt. Sreedevi Bijumon	„
18	Smt. Omana N.K.	„
19	Sri. Ramesh A.K	Driver cum Office Attended
20	Sri. Bijumon K.K.	„
21	Sri. Anoop G. Menon	„
22	Sri. Harikrishnan V.M.	„
23	Sri. Jayapalan K.P.	Bus Attendant
24	Smt. Swathylakshmi	Field Assistant, F.S.Puduveypu
25		Lab Assistant
26	Sri. Saneer N.S.	Field Assistant
27	Sri. Nazeer T.K.	Pump Operator
28	Sri. Sasidharan Pillai	Security Guard.

SCHOOL OF OCEAN SCIENCE AND TECHNOLOGY

Staff Strength

Teaching

1.	Dr. S Suresh Kumar,	Professor & Director
2.	Dr. K Gopakumar,	Professor of Eminence
3.	Dr. V K Venkataramani,	Adjunct Professor
4.	Dr. S Rajendran,	Adjunct Professor
5.	Dr. D D Namboodiri,	Adjunct Professor
6.	Dr. P T Mathew,	Adjunct Professor
7.	Dr. M V Joseph,	Adjunct Professor
8.	Dr. Basil Mathew,	Adjunct Professor
9.	Dr. S Sugunan,	Adjunct Faculty
10.	Dr. P V Joseph,	Adjunct Faculty
11.	Dr. Benny N Peter	Adjunct Faculty
12.	Dr. CVK Prasada Rao	Adjunct Faculty
13.	Dr. Jenny Ann John,	Assistant Professor on contract
14.	Dr. Justin David,	Assistant Professor on contract
15.	Dr. Prathibha,	Assistant Professor on contract
16.	Dr. Sirajudheen T K,	Assistant Professor on contract
17.	Dr. Sruthi Thalayappil RS	Assistant Professor on contract
18.	Ms. Vrindha P K	Guest Lecturer
19.	Ms. Megha Dixon	Guest Lecturer
20.	Ms. Haritha Y S	Guest Lecturer
21.	Dr. Sreena Raj	Postdoctoral Fellow
22.	Dr. Divya KR	Postdoctoral Fellow
23.	Dr. Elizabeth Mary John	Postdoctoral Fellow
24.	Dr. Adithya V. S	Guest Lecturer
25.	Dr. Honey H Das	Guest Lecturer

Non Teaching Staff

1.	Mr. Shaheer S, Section Officer
2.	Mrs. Sheena, Assistant on contract
3.	Mr. Babu Paul, Assistant on contract
4.	Ms. Neethumol K K, Tech. Asst. on contract

Student strength

	Programme	I Year.	II Year	Total
1	M.Sc- Marine Biology	30	28	58
2	M.Sc-Physical Oceanography	9	6	15
3	M.Sc.Food Science and Technology	32	30	62
4	M.Sc- Marine Microbiology	18	16	34
5	M.Sc- Biotechnology	19	15	34
6	M.Sc- Earth Sciences	11	7	18
7	M.Sc-Marine Chemistry	16	18	34
8	Ph.D.			55

Plan for the current academic period

- To furnish all the labs in the department with state-of-the-art design.
- To develop laboratories for Earth Sciences, Physical Oceanography, Food Science, Food Processing and Food Quality control.
- To acquire more equipment for the PG labs

Conference/Seminar/Workshop/Invited lectures organized

1. **Trainers Training workshop for Bakery Professionals:** A workshop was organized at KUFOS by Food Science and Technology, in association with BAKERS Association of Kerala and Association of Food Scientists and Technologists, India (AFST-I) Cochin Chapter on 28th Sep, 2017 for the professionals from Bakery Industry, which is the important segment of processed food industry. It focused on training the participants in the various disciplines of bakery products technology. The training programme was attended by 45 baker professionals and 35 students of Food Science and Technology of KUFOS. Resource persons included officers of the Food Safety Department, Govt. of Kerala and senior experts from Food Industry.
2. **HACCP Certification**
A training programme for certification of the students in HACCP was held in KUFOS from 4th Nov, 2017 to 9th Nov, 2017. The certification was conducted under the Department of Food Science & Technology by Synergy Systems and Food Quality Laboratory and Research Centre, Kochi, an internationally accepted company, to grant certification of HACCP in food analysis. It was a level 3 course of 5 days duration. 24 candidates of 4th batch MSc Food Science and Technology students participated in the course. They have passed the programme successfully and have been awarded certificates of HACCP.

Academic achievements of Faculty

1. Dr. K. Gopakumar, Chairman, Research Advisory Committee of Central Institute of Brackish Water Aquaculture, Chennai.
2. Dr. K. Gopakumar, Member of Advisory Board for Perma Pharma Industries, New Delhi.
3. Dr. S. Suresh Kumar attended 21 days short course on “Ecosystem Approach to Fisheries” at Wageningen University, the Netherlands.
4. Dr P.T Mathew attended board of Studies meeting of Calicut University under the Faculty of Food Science.
5. As the member of the State High Level Committee, Prof. S. Rajendran, Head, Dept. of Earth Sciences attended the second meeting on “Effective Implementation of International Technologies in Ocean Information Services for Kerala State Fisheries” which was convened by the Govt. of Kerala in Trivandrum on 24/10/2017
6. Prof. S. Rajendran, Head, Dept. of Earth Sciences participated and delivered an invited talk, “The Oceans”, in the National Seminar on “Recent Trends in Geosciences” organized by the Centre for Geotechnology, M.S University, Tirunelveli February 2018 during February 15-16, 2018.
7. Dr. V K Venkataramani, Served as Chairman for Viva- voce examination committee CIFE to select Ph.D. students (24th - 26th July)
8. Dr. V.K. Venkataramani, served as Resource person and given series of lectures on TAXONOMY OF FISHES to Scientists at Kochi unit of NBFGR (25th - 30th November).
9. Dr. V.K. Venkataramani, served as a Resource Person and given a series of lectures and practicals in fish stock assessment and in fish taxonomy to the students and faculty of College of Fisheries, Muthukuru, Nelloor, Andhra Pradesh from 24th February to 31st March.
10. Dr. V.K. Venkataramani, Served as Chairman for establishment Fisheries Polytechnique affiliated to Sree

- Venkateswara Veterinary University, Tirupati, Andhra Pradesh. (13th – 22nd September 2018).
11. Dr. K. Gopakumar, delivered Key Note Address in the workshop on 'AMR and Use of Antibiotics in non-human sectors' organized by Pushpagiri Medical College, Thiruvalla and International Organization called ReACT (Reactions on Antibiotic Resistance) at Hotel Apollo (DIMORA) Trivandrum.
 12. Dr. K. Gopakumar, delivered talks on Summer Institutes and Winter Institutes organized at CIFT, CMFRI Kochi.
 13. Dr. D. D. Nambudiri (2017). 'Quality of Animal based Food' in the Seminar held on the occasion of Quality Week at the Food Quality Laboratory and Research Centre, Kochi on 18 November 2017.
 14. Dr. D. D. Nambudiri (2018). 'Additives and Adulterants in Food' in the Seminar on Food Adulteration at St Teresas college on 23rd Jan 2018.
 15. Dr. K. Gopakumar is appointed as Member Management Committee of CIFE (Deemed University of ICAR) at Mumbai.
 16. Dr. K. Gopakumar served as Jury of ICAR National Awards committee.
 17. Dr. D. D. Nambudiri (2018). "Energy efficient fresh fish processing and marketing- a startup company experience in Kerala" in the Food Symposium 'Sustainable Technologies for food processing and preservation' at BITS Pilani campus, Goa on 8 – 9 February, 2018
 18. Dr. P.T Mathew delivered a talk on the Winter school on Marine Nutrients for fighting malnutrition: Recent Advances in marine biomolecules for human nutrition and healthcare; Organised by ICAR-CIFT, Kochi (1st to 21st February, 2018). Title of the paper: Seaweeds and their uses.
 19. Dr P.T Mathew co-authored a paper entitled Enrobed Snack Production from Devis's Anchovy (*Stolephorus commersonni*) and its Quality Evaluation during Frozen Storage. Journal of Aquatic Food Product Technology, 2018.

Academic achievement of Students

- ▷ Five students Bagged prestigious Innovation in Science Pursuit for Inspired Research” (INSPIRE) award sponsored by the Department of Science & Technology (DST), New Delhi. . Ms. Nikki Ramachandran (Marine Biology), Ms. Nimisha (food Science and Technology), Arya K.S. (Marine Chemistry) Ms. Devika Sugumaran (Biotechnology) and Ms. Reshma Sajan (Marine Microbiology) were selected for the prestigious “
- ▷ Miss. Princy J. R., third semester Physical Oceanography student attended the “WE HEARUS SUMMER SCHOOL -2017 on “Physics of the Ocean”, Germany, during 10 July -17th July, 2017.
- ▷ Nayana Narayanan Kutty, Ms. Aruna Thomas, Ms. Nikki Ramachandran joined Ph.D. in KUFOS.
- ▷ One student obtained KSCSTE Fellowship (Ms. Veena; Biotechnology)
- ▷ Students of Ist Semester Earth Sciences 2017-19 batch Earth Science, attended a National Seminar on Recent Trends in Geoscience organized by Centre for Geo technology, M. S University, Tirunelveli during February 15-16, 2018.
- ▷ Students Ist Semester Earth Sciences 2017-19 batch completed the field work in Rameswaram and Tiruchencode, Tamil Nadu state as part of their academic curriculum during February 17-20, 2018.
- ▷ Students of both I st and IInd year Earth Sciences had visited National Institute of Oceanography, Goa and National Centre for Antarctic and Ocean Research, Goa. Also Visited the Department of Marine Sciences, Goa University August 13 – 19, 2019
- ▷ Students of Earth Sciences carried out a marine placer sampling and data collection procedure in the beaches of Goa as part of their field work.
- ▷ All the students of MSc Biotechnology are currently pursuing their dissertation projects in premium research institutions like CCMB, Hyderabad (8 nos.) IISR Calicut (1) and RGCB, Trivandrum (2 nos) and IICT, Hyderabad (2 nos)
- ▷ II MSc. Students (2017-19) participated in a one-week long training program on molecular techniques in Plant biotechnology conducted by TBGRI, Trivandrum
- ▷ Students of 2017-19 Batch MSc. Biotechnology took part in an educational tour and visited The National

Centre for Sustainable Coastal Management (NCSCM) under Ministry of Environment, Forest and Climate Change, ICAR-Central Institute of Brackishwater Aquaculture (CIBA), The National Institute for Ocean Technology (NIOT), Integrated Coastal and Marine Area Management Project Directorate (ICMAM-PD), Pichavaram mangrove forest and The Centre of Advanced Study (CAS) in Marine-Biology, Annamalai University as a part of their educational tour from February 1-4, 2018.

- ▷ The Department of Food Science and Technology received Gurupur Sadanandha Prabhu Award for outstanding performance. The award was instituted in honor of Gurupur Sadanandha Prabhu by FQ Lab and Research Centre, India. Ms Athira A.S., First Rank Holder, M. Sc. Food Science and Technology received a medal, citation and Rs 5000/- cash from the Sri Giridhar Prabhu, Son of Late Gurupur Sadanandha Prabhu and Eminent Cashew Processor and Exporter, India.
- ▷ International trainee (1 student): Miss Parvathy (PhD Scholar, KUFOS) at Thailand Chiang Mai University for 3 months
- ▷ 25 students received HACCP Level 3 certification from Food Quality Lab and Research Centre, Kochi, making MSc Food Science and Technology students eligible for Quality Supervisor posts in Food Industries.

As a partial fulfillment of MSc Food Science and Technology course, it is mandatory to undergo attachment to carry out a project work. The 4th batch (2016-2018) had 24 students. Following are the establishments where students got placement for 4-5 months duration.

a) Defense Food Research Lab, Mysore	3 Students
b) Tuber Crops Institute, Trivandrum	3 Students
c) Cashew Research Lab, Quilon	2 Students
d) Spices Research Institute, Calicut	3 Students
e) Sciegenome, Kochi	3 Students
f) Central Institute of Fisheries Technology, Kochi	4 Students
g) Meat Products of India, Koothattukulam	2 Students
h) Export Inspection Council of India, Kochi	2 Students
I) Export Inspection Council of India, Mumbai	1 Student
j) KUFOS Lab	1 Student

- ▷ KUFOS JRF awarded to Ms Anjana Basanth, Food Science and Technology
- ▷ Four students of food Science and Technology received cash award from reputed companies for financially weak students.

- a) Ms. Sreelakshmi: Baby Marine International Seafood company, Kochi; Rs 20,000/-
- b) Mr. Sreejith and Ms. Aswathy: M.K.K Nair Fellowship: Rs 10,000/- each
- c) Ms Sumi: Fellowship for Best Student from Aasha Biochem, Vadakara: Rs 10,000/-

The following are the Industrial Visits conducted for the MSc Food science and Technology students for a practical exposure to the syllabus curriculum:

- a) Tata Tea factory, Munnar; Indian Cardamom Research Institute (ICRI), Myladumpara; Kurisumala Indo-Swiss Dairy Farm, Vagamon as part of 3 days Industrial Study tour from 26 – 28 Oct, 2017 for the 4th batch
- b) Spices Board, Ernakulam on 19 Oct, 2017 for the 4th batch
- c) Krishnan Food Processors (Cashew processing plant), Kollam on 10 Jan., 2018 for the 4th batch
- d) Modern Bread, Edapally, Ernakulam on 9 Aug, 2017 for the 4th batch
- e) Nirapara Rice Mill, Okkal on 31 Jan, 2018 for the 5th batch
- f) Milma, Eranakulam Dairy, Thripunithura on 17 Feb, 2018 for the 5th batch
- g) Food Tech Exhibition, Kerala (8th Edition) at Rajiv Gandhi Indoor stadium, Kochi on 27 Jan, 2018 for the 5th batch

- ▷ Ms. Arya K. S.(OST-2015-3001) got selected as Project Assistant in the in-house R&D Project under the Marine Living Resources Programme of CMLRE, Cochin Ministry of Earth Sciences, Government of India.
- ▷ Ms. Princy M. John(OST-2015-3008) 2015-17 Batch got selected as Senior Research Fellow, Centre for Aquatic Resource Management and Conservation (CARMC),Kerala University of Fisheries and Ocean Studies (KUFOS), Panangad P.O., Kochi, Kerala.
- ▷ Mr. Nasif M.M.(OST-2015-3004) co-authored a paper entitled “Antiproliferative effects of methanolic extracts of *Sargassum wightii* and *Caulerpa racemosa* on human cancer cells” presented at 11th Indian Fisheries and Aquaculture Forum organized by ICAR-Central Institute of Fisheries Technology (CIFT) Cochin at Le Meridian, Cochin, Kerala, India. 21-24 November 2017. (Poster Presentation).
- ▷ Ms. Ahana Mohan (OST-2016 2602), Ms. Krishnapriya T. B. (OST-2016 2607) and Ms. Lini Monachan (OST-2016 2609) Participated in Cruise no.358(Leg-II) of FORV *SagarSampada* which was dedicated on the studies of Integrated Taxonomical Information System and studies of spatial variations in the organic matter along the west coast of India during 30th March to 8th April 2017 (9 days) in the voyage along west coast of India.
- ▷ Ms. Jyothilakshmi S. A. (OST-2016 2606), Ms. Krishnendu P. (OST-2016 2608), Ms. Meenu S. (OST-2016 2610) and Ms. Twinkle M. L. (OST-2016 2612) Participated in Cruise no.363 of FORV *SagarSampada* which was dedicated on Ecosystem process of South Eastern Arabian Sea and study of spatial variations in the organic matter and microplastics distribution along the west coast of India during 3rd August to 22nd August 2017 and has covered 1473.5 nautical miles in the voyage along west coast of India.
- ▷ Mr. Vignesh E.R. (OST-2016 2613) got selected as Project Assistant in National Institute of Oceanography (CSIR-NIO) Regional Centre Kochi.
- ▷ The students carried out their dissertation work at National Institutes

S. No.	Name of the student	Institute	Topic
1	Anisa K. M.	IITM (Indian Institute of Tropical Meteorology)	Cyclogenesis characteristics over southern tropical Indian Ocean
2	Akil N. Nampoothiri	INCOIS (Indian national Centre for Ocean Information Services)	Trends in Significant Wave height in the Indian Ocean
3	Anjana S.	IITM	Air-Sea Interaction during active-break cycles of Monsoon
4.	Anusanker C. P.	IITM	Comparison of climate Models
5.	Deleena Jeltrude K. P.	IITM	Chlorophyll concentration and Light Penetration in the Arabian Sea
6	Krishna M.	IITM	Variability of Somali Jet and Upper Oceanic Processes
7	Ravikumar C. Nair	IITM	Oceanic Processes associated with the formation of El Nino
8	Swathy A. R.	IITM	Variation of Subduction over South Indian Ocean
9	Vidhya C. V.	IITM	Oceanic Processes associated with the formation of IOD
10	Vishnu Nampoothiri	INCOIS	Assessment of ROMS simulated biogeochemical parameters in the Indian Coastal waters

- ▷ M.Sc. second semester Physical Oceanography (2016-2018 batch) visited Cherai and Kuzhippilly coastal regions and Observed the wave –coast interaction processes and the shore protection techniques.
- ▷ During third semester Physical Oceanography, the students visited National Institute of Oceanography and National Centre for Antarctica and Ocean Research, Goa

Seminars/ Workshops attended

1. 20 students from the 4th batch of MSc Food Science and Technology attended the Seminar on GC-MS, LC-MS and NMR Spectroscopy held at St. Teresa's College, Ernakulam on September 22, 2017, conducted by Indian Society of Analytical Chemists, Kerala Chapter.
2. 35 students of M. Sc. Food science and Technology, KUFOS, attended the Trainers Training workshop for Bakery Professionals held on 28 Sep, 2017 held at KUFOS Conference Hall, Panangad.
3. 5 students from the 5th batch of M. Sc. Food Science and Technology attended the National Seminar on 'Recent Advances in Post-Harvest Fisheries Engineering' jointly organized by SOFT(I), Cochin and ICAR-CIFT, Cochin at CIFT, Kochi on 23 Sep, 2017.
4. 10 students from the 5th batch of M. Sc. Food Science and Technology attended the National Seminar on 'Healthy Bakes' held at BCM College, Kottayam on 10 Jan, 2018, inaugurated by Dr. Christy Fernandez IAS (Chairman, KSIDC and Former Secretary to the President of India).
5. Six students of 2016-18 batch of M.Sc. Marine Chemistry attended the Seminar on Climate change and Sustainability of Ocean Resources conducted by Centre Marine Living Resources and Ecology (CMLRE) Ministry of Earth Sciences and VijnanaBharati (ViBha) Mahatma Gandhi University, Kottayam on 4th October, 2017.
6. Five students of 2016-18 batch of M.Sc. Marine Chemistry attended NMR-MS Workshop conducted by Srinivasa Ramanujan Institute for Basic Sciences (SRIBS) under Kerala State Council for Science and Technology (KSCSTE) from 27th to 29th October, 2017.
7. 2017-19 Batch Marine Chemistry students visited The National Centre for Sustainable Coastal Management (NCSCM) under Ministry of Environment, Forest and Climate Change, ICAR-Central Institute of Brackishwater Aquaculture (CIBA), The National Institute for Ocean Technology (NIOT), Integrated Coastal and Marine Area Management Project Directorate (ICMAM-PD), Pichavaram mangrove forest and The Centre of Advanced Study (CAS) in Marine-Annamalai University as a part of their educational tour from February 1-4, 2018.
8. Three students of 2016-18 batch of M.Sc. Marine Chemistry successfully completed their M.Sc. Dissertation Project from The Central Institute of Fisheries Technology (CIFT) Head Quarters in Kochi, Two students respectively in National Institute of Oceanography Head Quarters (CSIR-NIO) in Dona Paula, ICAR- Central Coastal Agriculture Research Institute, Ela, Old Goa and National Center for Atlantic and Ocean Research (NCAOR) Goa. Three students are doing project in Centre Marine Living Resources and Ecology (CMLRE) Ministry of Earth Sciences, Kochi.
9. For 2017-19 batch of M.Sc. Marine Chemistry, three students are permitted to do their M.Sc. Dissertation Project in the ICAR -Central Institute of Fisheries Technology (CIFT) Head Quarters in Kochi, Three students in National Institute of Oceanography Head Quarters (CSIR-NIO) in Dona Paula, One each in the regional Centre's of NIO at Mumbai and Kochi, Two students in National Center for Atlantic and Ocean Research (NCAOR) Goa and one student in Centre Marine Living Resources and Ecology (CMLRE) Ministry of Earth Sciences, Kochi.
10. The students of 2017-19 of M.Sc. Marine Chemistry batch Goa during their educational tour in July, 2017 visited National Center for Atlantic and Ocean Research (NCAOR) and acquired knowledge about Indian Government research and monitoring activities in Antarctic and Arctic Ocean. They also visited National Institute of Oceanography (CSIR-NIO) in Dona Paula and learned more about the ocean environment and research works carried out at the institute, especially on chemistry and marine pollution.
11. PG students of 2017-19 batch of M.Sc. Marine Chemistry and 3 faculty members of Marine Chemistry Department visited the Quality control Lab of MPEDA, Cochin on 1st October, 2018. The students got valuable information about various analytical techniques like HPLC, UPLC MS-MS and ICP-MS etc.

12. Four students of 2017-19 of M.Sc. Marine Chemistry batch, Praveen Kumar K.P., Sanyo Sunny, Haritha Yespal and Swapna Sanil, all in final year M.Sc Marine Chemistry, participated in the “Marine Ecosystem Dynamics of Eastern Arabian Sea” (MEDAS) in the Arabian Sea onboard the national flag ship ORV Sagar Kanya. The cruise was led by the Central Marine living Resources and Ecology (CMLRE), along with other participants from NIO, CMLRE and NCCR. The ship belongs to National Centre for Antarctic and Ocean Research (NCOAR). The students contributed to the water and sediment analysis of the biogeochemical parameters. These students received onboard training on various oceanographic, chemical, biological and physical instruments, their operations, data acquisition and processing software. Four students of 201-20 batch is currently undertaking the next cruise of ORV Sagar Kanya.
13. Nikitha S Linda (2014-2016 Batch Biological Oceanography & Biodiversity) got placement as Project Associate – II in NIO, Goa.
14. Two students (Mr. Hrishikesh P. and Ms. Sheena Jose) of M.Sc. Biological Oceanography & Biodiversity were participated in International Workshop on Tropical Marine Biology and Ecology in the Andaman – Nicobar Island from 4th to 18th March, 2018.

Industrial Advisory Board meeting

The Industrial Advisory Board meeting was held at KUFOS headquarters on 30 Aug, 2017. This was a unique get together of academicians and industrialists for an active discussion. There were fruitful suggestions from the board member to effectively organize the 'Food Science and Technology' course to meet the industrial demands. Following is a list of the Industrial Advisory Board consisting of leading personalities from the food industry, for MSc and B.Tech programmes:

Industrial Advisory Board (For M.Sc., & B.Tech., Programmes)

- Dr. Ramachandran A, Vice Chancellor, KUFOS
- Sri George Paul, Managing Director, Synthite Industries, Kochi
- Dr. Victor George, Registrar, KUFOS
- Dr. K. Gopakumar, Professor of Eminence, KUFOS
- Dr. S. Suresh Kumar, Director, School of Ocean Science and Technology, KUFOS
- Mr. Simon John, Chairman, Lazza/Skei Uncle John Ice Creams, Kochi
- Mr. Sivakumar K., Innovative Foods Limited, Alappuzha
- Director, Central Institute of Fisheries Technology (CIFT), Kochi
- Director, National Institute of Fisheries Post Harvest Technology and Training (NIFPHATT), Kochi.
- Dr. Saji Eassow, General Manager, Meat Products of India, Koothattukulam
- Mr. Alex K. Ninan, Baby Marine International, Kochi
- Mr. Susheel Chandran B., Managing Director, Ernakulam Regional Co-operative Milk Producers' Union Ltd (ERCMPU), Milma, Kochi
- Dr. Ramchand C.N., Chief Executive Officer, SciGenom Labs Pvt. Ltd, Kochi
- Dr. Baby Jacob, Director, Food Quality Laboratory and Research Centre, Kochi
- Mr. NP Antony, Pavizham Healthier Diet Pvt. Ltd., Perumbavoor, Ernakulam
- Mr. George Thomas, Managing Director, Fruitomans, Kochi
- Mr. Cheriyan Kurian, Managing Director, HIC-ABF Special Foods Pvt Ltd., Aroor
- Prof. Sreedharan M, Aasha Biochem, Vadakara

Meetings attended by faculty members outside the University

1. Dr. S. Rajendran served as Chief Examiner for the Ph.D viva-voce at the Centre for GeoTechnology, M.S. University, Tirunelveli on 24-08-2018.
2. As External Member for scrutiny of applications for faculty positions in the Centre for GeoTechnology, M.S. University, Tirunelveli on 01-09-2018.

Equipment Purchased

Sl. No.	Equipment	Make/Model	Laboratory
1	Secchi disc		Marine Biology
2	Conductivity meter	ELICO	Marine Chemistry
3	Delux pH Meter		Marine Chemistry
4	Demineralised with digital conductivity meter	AQUOION TBD 50	Marine Chemistry
5	Depth Sampler 2Ltr		Marine Chemistry
6	Digital pH meter	ELICO	Marine Chemistry
7	Digital Turbidity Meter	ELICO	Marine Chemistry
8	Distillation Unit	BOROSIL	Marine Chemistry
9	Electronic Balance	SHIMADZU	Marine Chemistry
10	Electronic Relay Unit for Distillation unit		Marine Chemistry
11	Grab Sampler		Marine Chemistry
12	Heating mantle		Marine Chemistry
13	Hot plate with energy regulator		Marine Chemistry
14	Laboratory Centrifuge + Rotor	REMI	Marine Chemistry
15	Magnetic Stirrer with hot plate KMS-500	KEMI	Marine Chemistry
16	Magnetic Stirrer with hot plate KMS-650	KEMI	Marine Chemistry
17	Membrane filter holder Assembly		Marine Chemistry
18	ORP Meter		Marine Chemistry
19	Servo controlled Stabilizer		Marine Chemistry
20	Vacuum Pump Diaphragm		Marine Chemistry
21	-25°C Vertical Deep Freezer	HAIER BIOMEDICAL	Biotechnology
22	Autoclave		Biotechnology
23	Binocular Microscope CX21 I LED	OLYMPUS	Biotechnology
24	Bacteriological Incubator	KEMI	Biotechnology
25	Refrigerated Reagent cooler	LAB LINE	Biotechnology
26	Distillation Unit Single	BOROSIL	Biotechnology
27	Electrophoresis Unit - Horizontal With Power Pac	BIORAD	Biotechnology
28	Gas Stove		Biotechnology
29	Laminar Flow- Horizontal	KEMI	Biotechnology
30	Membrane Filter Holder		Biotechnology
31	Micropipette Variable Volumes		Biotechnology
32	pH Meter		Biotechnology
33	Pressure Cooker 20 Ltr		Biotechnology
34	Remi Centrifuge R8C	REMI 8 C	Biotechnology
35	Thin Layer Chromatography		Biotechnology
36	Vacuum Pump		Biotechnology
37	Vortex mixer		Biotechnology
38	Electronic Balance	SHIMADZU	Biotechnology
39	Hot Air Oven	KEMI	Biochemistry
40	Monocular Microscope		Biochemistry
41	Agate mortar		Earth Science
42	Deep Freezer (-40°C)	HAIER	Food Science and Technology
43	Jasco V-730 spectrophotometer	JASCO CORPORATION	Food Science and Technology
44	Air frier	PIGEON	Food Science and Technology
45	Flame photometer		Food Science and Technology
46	Leica Microscope	LEICA	Biodiversity

Publications

1. N.Jayakumar, V. K. Venkataramani, T.Vaitheeswaran and P.Jawahar 2016 Biodiversity and Biology of ornamental wrasses (Family;Labridae) of Gulf of Mannar, South East Cost of India *J.Mar.Biol.Ass India* Vol 58 (2) July – December 2016.
2. T.Vaitheeswaran and V. K. Venkataramani 2017 Stock assessment of Heavy beak Parrot fish *Scarus gibbus* (Ruppell, 1829) of Tuticorin cost, India (08 53.6N,78 16E and 08 53.8N,78 32E – 36M *International Journal of Aquaculture*, 2017, Vol.7, 159 – 165.
3. Karuppaswami, S. David Kingston, P.Jawahar, V.K. Venkataramani, V.Vidhya and P.Dattatreya 2017. Length – Weight relationship of *Lethrinus lenjan* and *Nemipterus japonicas* (Val.1830) from wadge Bank, South India *J.Exp.Zool.India*. Vol 20(1) p.539-542.
4. Karuppaswami, S. David Kingston, P.Jawahar, S. Anand, V.K. Venkataramani, V.Vidhya A (2017) Population dynamics and Stock Assessment of Deleogea threadfin bream *Nemipterus bipunctatus* (*Nemipteridae*) from the Wadge Bank, South India. *Journal of Applied and Natural Science* 10 (1) 59-63 (2018).
5. K. Gopakumar, P.T. Mathew, Preetham, E., Devika Pillai, 'Antibiotic resistant microorganisms in Aquaculture', in the National workshop on AMR and Antibiotic use for the voluntary sector, organized by React Asia Pacific in Apollo Dimora, Thiruvananthapuram Kerala on 31 July, 2017.
6. Shyama, S. and Basanth, A. (2017). Cytotoxic potential and photochemical studies of *Annona Squamosa* and *Annona Muricata*, in the UGC sponsored National Seminar on 'Bioprospecting A Quest for Natural Solutions at CMS College, Kottayam.
7. V. Venugopal and K. Gopakumar (2017). Shellfish: Nutritive value, health benefits and consumer safety. *Comprehensive Reviews in Food Science and Safety, USA*; Vol. 16 (Institute of Food Technology, USA) pp. 1219-1240.
8. K. Gopakumar (2018). Biomolecules from plants and animals for human health. Summer Institute, CIFT, Kochi (under print).
9. Sreejalakshmi S.H. and Preetham E. (2017). Alzheimer's disease: Restless for new track counteragents. *BAOJ Alzheimer's and Neurological disorders – Review*. Accepted.
10. Dr P.T Mathew coauthored a paper entitled Enrobed Snack Production from Devis's Anchovy (*Stolephorus commersonni*) and its Quality Evaluation during Frozen Storage. *Journal of Aquatic Food Product Technology*, 2018.
11. Benny N. Peter (2017). Role of Indonesian Throughflow on Indian Ocean Dipole- A remote sensing perspective. Presented at JCOMM-5 Marine Technical Conference, held at Geneva, WMO headquartes, 23-24 October, 2017.
12. Jyothi PV and S. Sureshkumar* (2018) Patterns of Vegetation Dynamics across Mild Disturbance Gradient in a Freshwater Wetland System in Southern India. *Wetlands* <https://doi.org/10.1007/s13157-018-1031-8>
13. IdreesbabuK.K.andS. Sureshkumar*(2017) Distribution pattern and community structure of sea cucumbers (Class: Holothuroidea) in different biogeographic regions of the selected Islands of Lakshadweep Archipelago, India. *Indian Journal of Geo-Marine Sciences*, Vol. 46 (3), March 2017, pp 569-575
14. Babitha P.P., Sahila M.M., Bandaru, S., Yadav, M., Nayarisseri, A. and S Sureshkumar* (2017) Common SAR derived from linear and non-linear QSAR studies on AChE inhibitors used in the treatment of Alzheimer's disease.. *Current Neuropharmacology*. *Current Neuropharmacology*, 2017, 15, 1093-1099. Pubmed ID: 27964704

Miscellaneous

1. Involved in the 4th Convocation of KUFOS and prepared the speeches for Hon'ble Minister of Fisheries, Hon'ble Vice Chancellor and Ceremonial sheet conducted the Procession Ceremony.
2. Marine Biology lab is renovated and a new lab is established in New Academic Block.

Placement

M.Sc. Biotechnology

- Mr. Jayagopal (OST-2016-23-05) joined duty as an Analyst in Dairy development Department, Palakkad
- Ms. Keerthi (OST-2016-23-08) joined duty as a PG trainee in Sci Genome, Kochi.
- Ms. Litty Sebastian (OST-2016-23-11) joined as a Project Assistant in Banana Research Institute, Thrissur
- Mr. Saravana Perumal (OST-2016-23-13) working as a project trainee in IISER, Trivandrum
- Ms. Reshma Sajan (2015-17) is working as a Project Assistant in ADAC, Fisheries Department, Kochi
- Ms. Lekshmi Narayanan (2015-17) is working as a PG Trainee in UBIO, a Biotech Start up concern in KINFRA, Kochi
- MS. Parvathy (2015-17) is working as a Trainee in AVT research center, Kochi
- Ms. Bivina (2015-17) is working as a Project Assistant in DDRRC, Ernakulam
- Ms. Akshara (2015-17) is working as a Project Fellow in TBGRI Extension center in Thrissur
- Ms. Gayathri (2015-17) is undergoing the BCIL training program in Hyderabad
- Mr. Yedhu Mohan (2015-17) is working as a Trainee in Sci Genome, Kochi
- Mr. Joshwa (2015-17) is working as a Purchase Manager in Amalgam sea food industry. Kochi
- Mr. Akhil (2015-17) has left for New zealand to pursue a degree in Food Science Technology in University of Auckland

M.Sc. Food Science and Technology

(2016 -2018 batch), 15 have received placement in various industries and colleges.

Some notable placements include the following;

- a) Mr. Velu Anand: FQ lab and Research Centre, Kochi
- b) Ms Jeena Raj: Amarjunaidi, Bangalore
- c) Ms. Athira Vijayan: Technochemical Industry, Coimbatore.
- d) Ms Neha: CIBA (ICAR) Chennai as senior Research Fellow
- e) Ms Anjali Chandran: Klonos Life Science, Kochi
- f) Mr Sakki Razak: AVT
- g) Ms Rintu and Ms Bala at Seafood companies at Kochi

M.Sc. Physical Oceanography

- Mr. Vishnu Narayanan Namboothiri, joined as Project fellow at CMLRE, Kochi
- Miss. Rinjusha T. R., joined as Junior Research Fellow at Amrita University, Kollam
- Miss. Anjana S., received the INSPIRE fellowship and joined INCOIS, Hyderabad
- Ravikumar C. Nair, joined NIO RC Kochi as Project Fellow
- Akil N. Nampoothiri, joined FUGRO
Global offshore and onshore geotechnical and survey services

Gallery of Industrial visits 2017-2018

Mathrubhumi, 06 Jan 2018



Vice Chancellor Dr. A. Ramachandran inaugurating the Trainers Training workshop for Bakery Professionals by lighting the lamp. Also seen are Dr. K. Gopakumar, Former DDG, ICAR, Dr. Victor George, Registrar, Dr. D D Nambudiri, President, AFST(I)Cochin chapter



At Krishnan Food Processors, Kollam



Participants of HACCP training programme



At Tata Tea factory, Munnar



At Nirapara Rice Mill, Okkal



At MILMA, Ernakulam Dairy, Tripunithara



At Indian Cardamom Research Institute, Mylarapadam



At National Conference 'Healthy Bakes' at BCM College, Kottayam



At Food Tech Exhibition, Kochi



Dr. Benny N. Peter at WMO Headquarters Geneva, Switzerland during October 2017.



SCHOOL OF OCEAN ENGINEERING AND UNDERWATER TECHNOLOGY

B. Tech Food Technology- New Course in Engineering

The food industry is the largest industry in the world and needs highly trained professionals in food science and technology to ensure the supply, quality and safety of food for everybody on the planet. By realizing the growing demand in a span of professional areas including R& D foods division, quality control, food microbiologists, quality control technologists process engineers, Food chemists, technical consulting, and sales and marketing, food suppliers and manufacturers, beverage manufacturers, wine companies, commonwealth and state research laboratories, product developers - **Kerala University of Fisheries and Ocean studies (KUFOS)** started the first batch of B.Tech Food Science & Technology on August 7th 2017 . Course content is given more importance in practical/ practice contents covering all aspects of Food Process Technology, Food Safety and Quality Assurance, Food Process Engineering, Food Business Management, Food Plant Operations, Basic Engineering Basic Sciences and Humanities.

Course inaugurated by our Honorable Vice Chancellor Dr.A. Ramachandran in presence of University Pro Vice Chancellor, Dr. V M Victor George Registrar, Dr.K Gopakumar Professor of Eminence KUFOS , Dr.Shankar T V Director of Research and Dr.Suriyakala Director of School of Ocean engineering & Underwater Technology.



Dr.Shivakumar, Innovative Sea Foods, Hindustan Uniliver, Kochi said their industry provides funding for innovative research and development in sea foods which was really a motivating speech.



Inauguration was followed by Orientation program for 3 days to lay a foundation of the new course. Program started with the introduction of highlighting science, Engineering & technology by Dr.Suriyakala C D, Director of School of ocean engineering & underwater Technology followed by the relevance of food science 7 technologies in India by Dr.Shankar T v Director of Research. Dr.K Gopakumar, the professor of eminence, KUFOS gave light on various career opportunities in Food Science & Technology

Next day session continued with Dr.B Jacob, Director, Food Quality Labs ,Kerala, Former J D,

Export council of India Evolution of Quality control in Food Industry who was emphasizing on quality assessment and certification of products. Prof. Dr.D.D.Nambudiri, Emeritus Professor KUFOS,Former Dean Kerala Agricultural University gave session on “Why Food Processing? and its relevance in the Indian Context”and Prof. Dr. Mathews, Adjunct Professor, Topic: “Food Safety”. Prof. Dr. V.K. Venkataramani, Adjunct Professor KUFOS,Former Dean, Tamil Nadu Veterinary and Animal Science University took session on Topic: “Proximate Composition & Nutrients in Fin Fish”. Dr.Jeny John, Assistant Professor,SOSTthrough the Topic:”Nutraceutical and Functional Food Revolution:Impact on the Food Industry” made the students to know that “Let the food be your medicine”with the quote prevention is better than cure”. Program concluded with the remarks from Director Dr.Suriyakala saying that the food in industry is the largest industry in the world and needs highly trained professionals in food science and technology to ensure the supply, quality and safety of food for everybody on the planet. Highlight of the orientation program was an industrial visit to premier Institution ICAR CIFT, Kochi



Industrial visit to premier Research Institution CIFT,Kochi

Staff strength

Staff Details

1. Dr. C.D. Suriyakala, Director

Contract staff(Assistant Prof)

- Ms.Pooja prasenana (Contract Staff) From Aug 2016
- Mr.George Basil (Contract Staff) From Aug 2017

Adjunct Professors

- Dr.K.V.Thomas(For M Tech 1st sem & 3rd Sem)
- Dr. T.K Sivadas(For M Tech 1st sem & 3rd Sem)

Guest Faculties for M Tech & B Tech

- Ms. Meeramol (For M Tech 3rd Sem & M Tech 1st Sem)
- Ms.Riya Robert(For M Tech 1st sem 2 subjects)
- Ms.Sherin Elizabeth George (For M Tech 3rd Sem)
- Ms..Sheelu Alex (For 1st sem B Tech)
- Ms.RemyaRanganath (For 1st sem B Tech)
- Mr.Rajesh. R (For 1st sem B Tech)
- Ms.Ambily V. for Lab (Only 2hrs Lab For 1st sem B Tech),) weekly once
- Mr.Rohan (For 1st sem B Tech) weekly 1 hr
- Mr.Vishnu Prasad for Lab (Only 2hrs Lab, For 1st sem B Tech)) weekly once
- Mr.Saravana Kumar (4 hrs on Thursdays, (For 1st sem B Tech))
- Dr.SGAnju (For 1st sem B Tech)
- Mr.Renjith T A Physical Education (PE) (For 1st sem B Tech)
- Dr.Sanjeevsreenivasan (For 2nd sem B Tech)
- Ms.Anju K (For 1st sem B Tech)
- Ms.Nella Jeena Jacob (For 1st sem B Tech)
- Ms.Anjana (For 1st sem B Tech)
- Ms.Parvathy(For 1st sem B Tech)

Student strength

M Tech (CHE) 8
B TECH(FT) 39

Plan for the current academic period

- Setting up of B Tech labs.(Infrastructure & Equipments)
- Getting AICTE approval

Details of Departmental meeting conducted with agenda

- **Meeting conducted with agenda & scheduled dates**
- o Setting up B tech First year lab discussing with experts, Identifying the reference books for the first year subjects, Identifying the standard Drawing boards, stool, Board stand (June 2nd 2017 11 a.m)
- o Deciding the pattern of Uniform,calendar of the entire course,time table,Call for guest staff(3rd July 2017)
- o As first semester Engg. labs were not ready, decision of utilizing the Research centers of KUFOS SNGCE, Kolencherry for doing the workshop Technology & Electrical technology lab (10th July 2017)
- o Inauguration of B Tech Course & preparing Orientation prog (July24th 2017)
- o Engineers day celebration



September 15 is celebrated as Engineer"s Day to commemorate the birthday of the legendary engineer Sir M. Visvesvaraya (1861-1962)



- Industiral VisitIndia Sea Foods, Kochi on Oct 4th , which is one of the renowned company primarily engaged in manufacturing and exporting a wide range of antimicrobial agent and specialty chemicals obtained from chitin and water soluble chitosan. These are widely catered to food Industry, and water treatment plants. Industry meaningfully utilize the waste caused by seafood processing plants & embarked on the ambitious project, in keeping with vision to use the waste for value added products
- Pavizham Ricemills at Angamaly in March 2018

Sl.No.	Name of Student	Project Topic
1	M Sahal K H (OET-2015-25-01)	Automation Of Sluice Gate
2	Paul T A (OET-2015-25-02)	Effects Of Structure On Indian Coast
3	Amrutha Joachim (OET-2015-25-03)	Automation Of Sensors And Instrumentation Systems For Applications In Aquaculture
4	Prabeesh Kumar M V (OET-2015-33-02)	Evaluation and Comparison of Warp Tension In Trawl Nets Made Of Different Materials
5	Sreejith S Kumar (OET-2015-33-03)	Study Of Fuel Consumption Of Fishing Vessels In Longlining&Gillnetting

6	Anoop V M Kumar (OET-2015-32-01)	Study On Shoreline Changes In The Eraviputhenthurai Beach, Kanyakumari Coast,TN
7	Vishnu S H (OET-2015-32-03)	Morphological Chateristics Of A High Energy Coast-Case Study Of Adimalathura-Shankumugham Sector of Trivandrum, SW Coast Of India.
8	Athul Krishna K R (OET-2015-31-01)	Siltation And Tranquility Studies For A Harbour Breakwater
9	Jiya George (OET-2015-31-04)	Comparison Of Measured and Modelled Nearshore Wave Parameters And Long-shore Currents
10	MRIDULA G M (OET-2015-31-05)	Numerical Modelling Of Hydrodynamics And Sediment Transport Along Sinquerim-Baga Beach Stretch, Goa
11	Nighil Aravind (OET-2015-31-06)	Development of Punappara Fishing Loading Center.
12	Rahul R G (OET-2015-31-07)	Study Of Oil Spill Movement & Weathering Analysis Based On Numerical Model On West Coast Of India.
13	Rakhesh P R(OET-2015-31-08)	Tidal Response And Its Effects On Ashtamudi Estuary.
14	Sreelakshmi S (OET-2015-31-09)	Wave Transmission Studies Over Segmented Submerged Breakwater
15	Tom elias (OET 2015 31-10)	Analysis Of Berthing Structures Using Plaxis



Academic achievements of Faculty

Academic achievement of Students

- Mridula g murali attended international conf crystal ball vision on Sc & Engg for societal upliftment organized by CSIR,NIO Goa on 7,8th aug 2017
- Projects of 15 M Tech students

Academic achievement of Faculty

- 2 Ph D Research Scholars Joined in the school

I. Basim Basheer (Reg No : OET-2017-53-01)

Title: Design Challenges of Underwater Wearable Antennas for Data Monitoring

II. Nebu Pulickal (Reg No : OET-2017-53-02)

Title: Study of conformal antenna design for underwater sensor nodes

Research achievements and publications of Staff and Students

- Pooja Prasanen¹, Suriyakala.C.D² Intelligent Underwater Image Processing using Ontology International conference on sustainable Blue economy on Feb 5th & 6th 2016
- Ø Publications of MTECH(ICZM) Students
- Muhammed Sahal , “Automation of Sluice Gate in Shrimp Farming” ,60th Annual IETE Convention 2017 (AIC-2K17),Theme: Marching Towards Digital Economy,17th – 18th September, 2017 ISBN : 81-903895-3-X pp 60-64
- Amrutha Joachim, Automation of Aquaculture Systems Using Sensors & Instruments 60th Annual IETE Convention 2017 (AIC-2K17),Theme: Marching Towards Digital Economy,17th – 18th September, 2017 ISBN : 81-903895-3-X pp 109-112

Ø Publications of MTECH staff

- Pooja Prasanen, “Intelligent Underwater Image Processing using Ontology”, International Conference on Towards A Sustainable Blue Economy: Production, Strategies & Policies, on 4-6th Feb 2016 in book of abstracts, pp-134.
- Noujas V, Thomas K V and Ajeesh N R, 2017. Shoreline management plan for a protected but eroding coast along the southwest coast of India, International Journal of Sediment Research, <http://dx.doi.org/10.1016/j.ijsrc.2017.02.004>, (accepted on 16 February 2017)
- 4. Neelima T, Noujas V, Thomas K V, Kurian N P, 2018. Coastal morphology and beach stability along Thiruvananthapuram, South-west coast of India. Natural Hazards (accepted on 27 Oct 2017)
- 5. Noujas V and Thomas K V, 2018. Shoreline management plan for a medium energy coast along west coast of India”, Journal of Coastal Conservation (accepted on 16 Feb 2018)

Ø Publications with research students

- Tata Sudhakar, Suryakala C D Paper entitled as Validation of Tsunameter in laboratory Environment Accepted by Indian Journal of Geo Marine Science (IJMS) – CSIR Journal. Web of Science Journal. July/august 2017 I.F 0.316, ISSN: 0379-5136
- Tata Sudhakar, Suryakala C D Estimation of Tsunami Direction and velocity using deep sea data, Indian Journal of Science and Technology , p - ISSN : 0974-6846 . e-ISSN : 0974-5645, Indexed by SCOPUS., Scimago ‘H’ Index : 18
- Tata Sudhakar, Suryakala C D, 2017, “ A Comparison of Forecasting Algorithms for Tsunami Detection with In-Situ Data” International Journal of Engineering and Technology, vol no. 9, no. 2, April/May 2017, pp 449-453. e-ISSN : 0975-4024 p-ISSN : 2319-8613 Indexed by SCOPUS.
- Krishnamurthy, Suriyakala C D Indian Journal of Geo Marine Science (IJMS) entitled as “Performance of Underwater Acoustic Channel Using Modified TCM OFDM Coding Techniques”, published in, Vol.: 46, Issue: 03, 2017, pp: 629-637
- Anjali K J and Suriyakala C.D (2017) “A Highly Miniaturized Patch Antenna” Organized by IEEE International Conference on Circuit, Power and Computing Technologies ICCPCT-2017 on 20-21st April 2017, organized by Baseliious Mathews II College of Engineering, Kollam, Kerala. IEEE Catalogue Number CFP 17IPT-DVD, ISBN 978-1-5090-4966-0 will be published in IEEE digital-xplore.
- Arya Mohan and Suriyakala C.D (2017) “Survey on wideband omnidirectional patch antenna with circular polarization,” (NCICIS Mar 2017) organized by Sree Narayana Gurukulam College of Engineering and IETE kochi chapter in association with NEST group of companies and published in Gurukulam International Journal of Innovations in Science and Engineering (GIJISE) vol-2, issue 1-special issue
- Ashly Eldhose and Suriyakala C.D (2017) “Metasurface enabled wearable antenna for medical implant applications” organized by IEEE International Conference on Circuit, Power and

Computing Technologies ICCPCT-2017 on 20-21st April 2017, organized by Baseliious Mathews II College of Engineering, Kollam, Kerala. IEEE Catalogue Number CFP 17IPTDVD, ISBN 978-1-5090-4966-0 will be published in IEEE digital-xplore.

- Dona Mohan and Suriyakala C.D, (2017) “Ergonomics of Textile antenna for body centric wireless networks for UWB application” organised by IEEE International conference on Circuit, Power and Computing Technologies ICCPCT-2017 on 20-21 st April 2017, Organised by Baseliious Mathews II college of engineering ,Kollam ,Kerala, IEEE Catalogue Number CFP 17IPT-DVD, ISBN 978-1-5090-4966-0, will be published in iee digital-xplore
- Dona Mohan and Suriyakala C.D, (2017) “An innovative textile antenna for body centric wireless networks”, in National Conference on Information ,Communication and Intelligent Systems (NCICIS 2017) organised by Sree Narayana Gurukulam College of Engineering , Kolenchery and IETE Kochi chapter in association with NEST group of companies and published in Gurukulam International journal of Innovations in Science and Engineering (GIJISE) vol-2, issue 1- special issue , pp. 16-21, ISSN:2454-6631
- Sanjana Peter and Suriyakala C.D (2017) “Small-Size Circular Polarized Patch Antenna” organized by IEEE International Conference on Circuit, Power and Computing Technologies ICCPCT-2017 on 20-21st April 2017, organized by Baseliious Mathews II College of Engineering, Kollam, Kerala. IEEE Catalogue Number CFP 17IPT-DVD, ISBN 978-1-5090-4966-0 will be published in IEEE digital-xplore.
- Swathy S Nair and Suriyakala C D (2017) “Survey on different rectennas used in RF Harvesting System” in National Conference on Information, Communication and Intelligent System (NCICIS 2017) organized by Sree Narayana Gurukulam College of Engineering. Kolenchery and IETE Kochi chapter in association with NEST group of companies and published in Gurukulam International journal of Innovations in Science and Engineering (GIJISE) vol2, issue 1- special issue , pp. 64-67 ,ISSN 2454-6631.
- Swathy S Nair and Suriyakala C D (2017) “ Survey on different RF harvesting system” organized by IEEE International conference on Circuit Power and Computing Technologies ICCPCT 2017 on 20 – 21 st April 2017 Organized by Baseliious Mathews II College of engineering, Kollam, Kerala, IEEE Catalogue Number CFP17IPT-DVD ISBN 978-1-5090- 4966-0 will be published in IEEE digital xplore
- Krishnamoorthy, N.R., Suriyakala, C.D. Performance of Underwater Acoustic Channel using modified TCM OFDM coding techniques Indian Journal of Geo-Marine Sciences IJMS Vol.46(03) [March 2017], 0975-1033 (Online); 0379-5136 (Print), Impact Factor of IJMS is 0.172 (JCR 2016)
- Basim Basheer, Nebu Pulickal and Suriyakala C D (2018), High Frequency Antenna Design Challenges for Underwater Communication – An Intensive Probe, Oceanography & Fisheries Journal, Openaccess Journal, ISSN-2476-0536, Vol. 5, Issue 5, Jan 2018

Ø PHD REGISTRATION of KUFOS students in IIT, NIT etc

- 3 (Sree Lakshmi S (IIT Kharagpur) Tom Alias & Athul Krishna (NIT Surathkal) MTECH (2015-17)

Applied Mechanics & Hydraulics under Category OC / PT Sch

• Tom Elias:

• Athul Krishna

Applied Mechanics & Hydraulics under Category OC / PT Sch

• Sreelakshmi S

The Department/Centre/School of Ocean Engg and Naval Architecture of the Institute

Ø Research Assistant

- Ms. Mridhula (IIT Chennai) MTECH (2015-17)

Department of Ocean Engg. JRF

Topic: Nonlinear Interaction between extreme waves & floating bodies with deformed structure under the guidance of Dr. Sriram V

Academic/Research/Extension activities of Faculty outside the University

M.Tech Coastal & Harbor Engineering Industry Institution Interaction through Industrial Vist

National Institute Ocean Technology (NIOT) INTERNSHIP(10 days)

The M.TECH third semester student of school of ocean engineering and under water technology, KUFOS visited National institute ocean technology(NIOT) Chennai for their internship work and got an exposure about ocean data acquisition, data assimilation, HF RADAR installation and their function, ocean modeling and data processing ,analysis. They also got knowledge about EIA studies, ARC GIS, mapping, Sediment transport analysis using Delft 3D mike 21 and wave structure interaction using plaxis software.

The National Institute of Oceanography (NIO) GOA INDUSTRIAL VISIT (14.03.2018 to 17.03.2018)

The major research areas include the four traditional branches of oceanography - biological, chemical, geological/geophysical, and physical – as well as ocean engineering, marine instrumentation and marine archaeology. Our students could attend seminar on ongoing project in NIO GOA and visited their museum which has the marine instruments, sensors, sample collectors, samples (manganese nodules) etc., They could also interact with scientist of NIO, Goa to know about the current research opportunities in ocean engineering field.

Cochin Port Trust (5thFeb 2018)

The Cochin port consists of mainly two wharf, Ernakulam wharf and Mattanchery wharf. We first made a visit to the Ernakulam wharf. The things that we witnessed are fenders, mooring bollards, unloading of ships and tugging of ships. At Mattanchery wharf we got a class about the fire fighting system



Meetings attended by faculty members outside the University

Dr.Suriyakala CD Gave talk on

1. Recent Trends in Computing and communication at Adishankara college of Engineering Feb 26th 2018
2. Women Empowerment on Women's day at Illahia School of Science & Technology, Muvattupuzha on March 8th 2018

External training given to The school of Naval Oceanography and Metereology(SNOM)

The 06Foreign trainees (Myanmar, Sri Lanka, Indonesia & Bangladesh) of SNOM- India navy visited our Marine Instrumentation lab and given training for coastal Dynamics monitoring system and the 16-channel data logger. The data includes meteorological, water resources and water quality. (Feb 1st 2018)



Department in news B.Tech Drawing Class





Crop Production Field work

SCHOOL OF MANAGEMENT AND ENTREPRENEURSHIP

The School of Management and Entrepreneurship is one of the four schools under the Kerala University of Fisheries and Ocean Studies (KUFOS), which offers four unique Post-Graduate courses, Viz; M.B.A. (Master of Business Administration-General Stream) and M.B.A. (Energy Management), L.L.M (Maritime Law), M.Sc. (Statistics) and Ph.D. Programme in Management and Law. The School also offers various courses for the B.F.Sc., B.Tech., M.F.Sc., M.Sc. & M.Tech. Programmes offered by other Schools and Departments of the University.

Department: Department of Business Administration and Management

Student strength	MBA2017 Batch	: 41
	MBA2018 Batch	: 14
	PhD	: 6

Plan for the current academic period	: M.B.A. (General Stream)
	: M.B.A. (Energy Management)
	: Ph.D. (Management)
	: Teaching, Research and Extension activities, Industrial Visits, Skill Development Programmes

Department of Extension, Economic and Statistics

The School of Management & Entrepreneurship is one of the seven Schools established as per KUFOS ACT, 2010. The School is under the Faculty of Management, Humanities and Social Sciences. The mandate of the School is teaching, research and extension. The focused areas are business management, fish marketing & trade, fisheries economics, cooperative management, maritime and fisheries laws, socio-economics of the fisher folk & other stakeholders, statistics, entrepreneurship development and information technology. The School of Management & Entrepreneurship started functioning from the Academic year 2012-13 by launching an MBA Programme.

I. Academic Programs

The School offers five Post Graduate programs and Ph. D. Programme in various disciplines under its three Departments as per the details given below.

Department	PG Programs	Ph.D
Department of Business Management and Administration Economics	M.B.A. (Dual Specialization), M.B.A.(Energy Management)	Management, Commerce and
Department of Economics and Statistics	M.Sc. (Statistics)	Nil
Department of Legal Studies	L.L.M. (Maritime Law)	Law

b. Inter school programme

The school offers courses as an inter school program for the various undergraduate and Post Graduate programs such as B. F.Sc, M.Sc., M.Tech courses run by the other six schools/ Faculties of the University.

Department of Business Administration and Management	Department of Extension, Economics and Statistics	Department of Legal Studies
Dr. Afsal E. M., Associate Professor & Head of DBMS	Sri. Mathew Sebastian, Associate Professor, Head of E&S	Ms. Ashamol V., Assistant Professor on contract
Dr. Rajesh K., Assistant Professor	Dr Daisy C Kappan, Professor and Director of Extension i/c	Dr A. S. Saroja : Adjunct Faculty
Dr Anoop K.K., Assistant Professor	Smt. Alphi Korath, Associate Professor	Sr Aliyar M.E.: Adjunct Faculty
Dr Jeetha Jose: Guest Faculty	Prof.(Dr.)K.R., Muraleedharan Nair, Adjunct Faculty	
Dr Jominy Joice: Guest Faculty	Mrs.Ambily Jose: Guest Faculty	
Mrs.Anjali M.A.: Guest Faculty	Mrs.Sethulakshmi Bahuleyan : Guest Faculty	
	Ms.Ambily Jaison : Guest Faculty	
	Mrs. Sowbhagya S. Prabhu:Guest Faculty	
	Ms. Ambily Balakrishnan :Guest Faculty	

iii.Non-teaching Staff

Mr. Vijay Shine K.V	Section Officer
Ms. Shalet	Typist
Mr. Jishanth	Assistant on contract
Mr..Mathew Stephan	Reference Assistant on contract

iv. Research Centres of the School

1. Centre for Livelihood Security and Development Issues among Fisher folk of Kerala'
2. Centre for Indigenous Knowledge of Traditional Fisher folk – Looping Traditional Knowledge and Science'
3. Centre for Survey and appraisal of Socio-economic Status of Fisher folk'
4. Centre for Field Consultancy and Data Analysis'
5. Chair for Socio-Economic Empowerment of Fisher folk and Archiving Traditional Knowledge of Fishermen

v. External Aided Projects: SME

The School completed four major projects sponsored by NANSEN, CMLRE, Department of Bio Technology and State Institute of Rural Development. The details are given below.

Project	Amount (Rs.)	Project Team	Funding Agency	Status
INDO MARECLIM Project on Seasonal Variations in Fish Landings and its Impact on the Livelihood of the Fisherfolk of South-West Coast of India (Kerala).	8.0 Lakh	1. Dr. V. Ambilikumar -Principal Investigator 2. Dr. M. S. Raju - Co-Principal Investigator 3. Shri. Mathew Sebastian -Co-Principal Investigator	NANSEN Environmental Research Centre (India).	Completed (2015)
Impact Assessment Study of Mahatma Gandhi National Rural Employment Guarantee Scheme in Alappuzha District	5.4 Lakh	1. Dr. V. Ambilikumar -Principal Investigator 2. Dr. M. S. Raju - Co-Principal Investigator 3. Shri. Mathew Sebastian -Co-Principal Investigator	State Institute of Rural Development, Kerala	Completed (2014)
Ornamental Fish Culture for Income and Employment Generation & to enhance the Socio-Economic status of the Rural Population of Kumbalam Panchayat, Kanayannur Taluk, Ernakulam District, Kerala State, India	20 Lakh	1. Dr. T. V. Anna mercy -Principal Investigator 2. Dr. V. Ambilikumar -Co-Principal Investigator	Department of Bio- Technology, Govt. of India	Completed (2010)
Biology, Resource characteristics and Stock assessment of deep-sea fin fishes and prawns in the depth zone 200-1200 m along the southern and central Indian Ocean	34.98	1. Smt. Alphi Korath - Principal Investigator 2. Smt. Malika V - Co-Principal Investigator	CMLRE, Mo ES, Govt. of India	Completed(2 017)

vi. Workshops

- a) School of Management and Entrepreneurship, KUFOS organized a Trainers' Training Programme on 24th Aug 2013 in the campus towards equipping the students on 'Sea safety and fishermen welfare'. The program was conducted in four sessions. The sessions were engaged by experts from the Department of Fisheries, Indian Navy and Central Industrial Security Force. The services rendered by the respective agencies with a view to ensuring the safety of fishermen at sea and also the fishermen welfare schemes were discussed in the program.
- b) As part of the Social Responsibility Programme of the 2012 Batch MBA students of SME, KUFOS jointly organized the workshop in association with the State Dept. of Fisheries, Indian Navy, Indian Coast Guard, CISF, Marine Enforcement wing, *Kadalora Jagrata Samithi* and *Njarakal Janamaitri* Police. A total of forty one fisher-folk including full time and part time fishers registered for the workshop.
- c) School of Management and Entrepreneurship, KUFOS organized a two day National workshop on Research Methodology with a special emphasis on Statistical packages on 27th & 28th of February, 2020.



vii. LIBRARY

The library is equipped with large number of books, journals and periodicals.

viii. Classrooms

The classrooms are spacious and specifically designed to facilitate participative learning. They are equipped with all the necessary modern teaching and presentation facilities.

ix. Other Major activities of the School

The Admission Supervisory Committee (ASC) for Professional Colleges in Kerala (Hon'ble Justice **Rajendra Babu Committee**) has decided to entrust KUFOS to conduct the MBA entrance examination **KMAT 2020** and Dr. M.S. Raju, Professor & Director, SME was selected as Convenor of the exam

DEPARTMENT WISE DETAILS

A. DEPARTMENT OF BUSINESS ADMINISTRATION AND MANAGEMENT

KUFOS School of Management and Entrepreneurship offers two MBA Programs in General Management and Energy Management with an intake of 42 and 15 respectively. The programs were launched in the academic year 2012-13 and 2015-16, respectively. The basic objective of this four semester Postgraduate programme in Business Administration, leading to MBA Degree is to produce trained professionals to work in managerial and leadership positions as well as enthusiastic entrepreneurs in an ever changing business environment where advanced technology and multicultural situations play important roles in the operations of business and industry.

The MBA(General Management) programme of KUFOS provides students an option to specialize in any two areas from among the fields such as Finance, Marketing and HR. MBA(Energy Management) programme is a unique one and intends to churn out specialised professionals who would be able to cater to the needs of one of the decisive sectors of the economy called energy. Both the MBA Programmes impart diverse set of knowledge and skills to manage business and industry and exposes student to real world situation through case studies, interaction with industry and industrial visits. Hence it is a good training ground for budding managers and entrepreneurs and adds value to a person's career, as the curriculum encompasses all that industry expects.

I. Research Publications during 2016 - 2020

Ambilikumar, V, Raju, M.S. and Sebastian Mathew (2016), The Changing Climate : Impact and Observations of Fisher folk of Kerala, International Journal of Science, Environment and technology, Vol.5, No.6, pp.4147-4162. ISSN 2278-3687 (O) 2277-663X (P). 2016.

Mariya T Cheeran, Saji K S (2016), Appalling Insinuation of Software Jobs on Family Environment: A Study with Special Reference to IT Professionals in Kerala, Management and Labour Studies, Sage Publication, Vol 40, Issue 1-2

Govind S. Menon (2016) – Parametric factors affecting the Performance improvement of a Solar Still coupled with a flat plate collector, International Journal of Engineering Research (IJER), 5(1): 30-33.

Govind S. Menon (2016) – Design and fabrication of a Solar Flat plate collector to assess its efficiency, International Journal of Mechanical Engineering and Research (IJMER), 189-193.

M.S. Raju, Ambilikumar.V., Malika.V., Sreeja P.V., et al. (2017), Socio-Economic Status of Fisher folk , Kerala, India. Report of Kerala State Plan Project, Working Paper-I. KUFOS, Kochi..

M.S. Raju, Ambilikumar.V., Malika.V., Sreeja P.V., et al. Socio-Economic Status of Fisher folk , Kerala, India. Report of Kerala State Plan Project, Working Paper-II. KUFOS, Kochi., 2017.

M.S. Raju, Mathew Sebastian and Mekha Bose K. Fish Production and Export: Status, Trends, and Prospects. Report of Kerala State Plan Project: Centre for Field Consultancy and Data Analysis. 2017.

Ambilikumar, V (2017), Performance of Primary Level Fishermen Development & Welfare Cooperative Societies in Kerala – an Evaluation, International Journal of Management and Social Science Research Review, Vol.1, Issue 38, August-2017, E-ISSN- 2349-6746, ISSN No.2349-6738, pp.9-16.

Lakshmi P. and M.S. Raju. (2017) Emerging Trends in Foreign Trade of India-Retrospective and Prospective with Special Reference to Post Globalization Changes. *Erudition - The Albertian J. of Management*. ISSN 0973-7839.

Lakshmi P. and M.S. Raju. (2017) Trends in seafood trade with special reference to frozen shrimp export-

retrospective and prospective. *International J. of Research Culture Society*. Vol.1, Issue-10, 2017.ISSN 2456-6683.

Lakshmi P. and M.S. Raju.(2017) Emerging Trends in Foreign Trade of India –A Glimpse into the Post Globalized Economy. 6th International Conference on Studies in Education, Economics, Business and Law, Pattaya, Thailand, 10-11 July 2017. ISBN 978-81-933894-7-8.

Anoop K.K, (2017), Risk in Internet Banking: A Theoretical Approach *International Journal of Trend in Scientific research and Development (IJTSRD)*, Vol-1, Issue-6, PP- 1090-1095. ISSN: 2456-6470, Impact factor- 6.005

Ambili K P and Ambilikumar, V (2017), A study on preference towards online retailing among youngsters in Kerala, *International Journal of Research Culture Society*, Vol.1, Issue X, ISSN 2456-6683, pp.1-7.

Reshma Mariam Mohan & Anoop K.K., (2017) Organizational Culture And Job Satisfaction: A Literature Review, *International Journal of Research in Economics and social sciences (IJRESS)*, Vol. 7, 193-199

Anoop K.K., (2017), A Study on Internet Service quality in Developing countries- A meta-Analysis of the Findings so far, *MIRROR, Peer Referred International Journal of Commerce, Management & Social Science*, ISSN 2249-8117, Vol. 7, No. 3., UGC Approved Journal (No.64272)

Swetha Suresh & Anoop K.K., (2018).Impact of GST rates on consumers in AC restaurants in Kochi City, *Journal of advanced research in dynamical and control systems*, Issue: 04, PP- 1801-1806, (**Scopus**).

Asha Vijay T. and M.S. Raju.(2018) Conceptual Framework to Comprehend the Supply Chain Management of Agriculture Products in Kerala. *Methodological Development in Business Research*.ISBN 97893867-24236. P 87-96.

Lakshmi P. and M.S. Raju.(2018) Analysis of Seafood Export from Kerala with Special Reference to Item-wise Composition.*International Journal of Management and Social Science Research (IJMSSR)*, Vol. 7, No.2, 2018. ISSN 2319-4421.

Asha Vijay T. and M.S. Raju.(2018) Conceptual Framework to Comprehend the Supply Chain Management of Agriculture Products in Kerala.*Methodological Development in Business Research*.ISBN 97893867-24236. P87-96.

Govind S.Menon (2018)-Parametric Factors affecting the Performance Improvement of a Solar Still, *Indian Journal of Scientific Research(IJSR)*,18(1): 15-19.

Ambili K.P. and Ambilikumar, V (2019), a study on preference of women consumers towards online advertisements with special reference to Kerala, *International Journal for Scientific Research and Development*, Vol.7, Issue 6, August 2019, ISSN 23210613, pp.375-379.

S.Anjali, V.G., Avinash & Anoop K.K., (2019), Adoption of mobile learning Apps among students: *Journal of advanced research in dynamical and control systems*, Vol-11, 04- Special Issue, ISSN 1943-023X, (**Scopus**).

Gopakumar Swathy, Nair M.B. Bhadra & Anoop K.K., (2019).Impact of Celebrity endorsement on surrogate advertisement among Youth in Kerala, *Indian Journal of Public health research & development*, Vol-11, Issue (5), ISSN – 0976-0245 (**Scopus**)

P. Panjami, L.Lakshmi & Anoop K.K., (2019), Impact of service quality dimensions on customer satisfaction in retail banking, *Journal of Advanced Research in Dynamical & Control Systems*, Vol- 11, 04- Special Issue, ISSN 1943-023X, (**Scopus**).

Jithin Benedict and M.S. Raju, (2019), Mediating role of perceived risk on relationship between Perception towards online luxury shopping and online purchase intention: A study with reference to young professionals in

India. *Asian Review of Social Sciences. Special Issue ICMAS-1, Vol.8, No.51. ISSN: 2249-6319. P36-41.*

Sabu Varghese and M.S. Raju, (2019), Psychological contract breach and organizational outcomes: Moderating effect of tenure. *Asian Review of Social Sciences. Special Issue ICMAS-1, Vol.8, No.51. ISSN: 2249-6319. P46-50.*

Jithin Benedict and M.S. Raju, (2019) Are Online Consumers Price Conscious? A study with reference to India Youth on Price Consciousness and Purchase Intention of Online Personal Luxury Products. *International Journal for Research in Engineering Application & Management (IJREAM).ISSN: 2454-9150 Vol-4 Issue 12, P263-270.*

Jithin Benedict and M.S. Raju (2019), Rich, Extravagant and Hedonistic: A Study with Reference to Indian Youth on Perceived Hedonism and Purchase Intention of Online Personal Luxury Products. *International Journal of Advance and Innovative Research). ISSN: 2394-7780 Vol-6 Issue 2, P96-104.*

Asha Vijay T. and M.S. Raju (2019), Marketing and Exchange of Farm Products in Facebook Groups: A Case Study. *Indian Journal of Marketing, ISSN 0973-8703 Vol.49 Issue 10, P58-68.*

Raju M.S., T.V. Amrose and Mathew Sebastian, (2019), Seafood export from Kerala: Trends and Future Prospects. International Conference on Aquatic Resources and Blue Economy (AQUABE 2019) 28-30 November, Organized by Kerala University of Fisheries and Ocean Studies, Kochi, Kerala. Book of Abstracts P 184. 2019.

Afsal E.M.(2019), 'Blue Economic Resources: Prospects and Challenges for India and ASEAN States', International Conference on Aquatic Resources and Blue Economy, AQUABE 2019 organized by KUFOS at Kochi during 2019 November 28-30.

Afsal E.M.(2020), Technology Adoption, Growth and Human Resource Accumulation: A Study of Banks, Seventeenth AIMS International Conference on Management organized by AIMS International - The Association of Indian Management Scholars International and Indian Institute of Management Kozhikode at IIM Kozhikode during 2020 January 2-4 .

Afsal (2020), Linkages among Corporate Governance, Intellectual Capital and Firm Performance: Literature Review, *International Journal of Disaster Recovery and Business Continuity*, 11(2), 299-311, 2020

Afsal E.M (2020). Volatility and Information Behavior: A Study on Shariah Index and General Index. *Journal of King Abdulaziz University – Islamic Economics*, 7383-1018, 33(1)

Afsal E.M. (2020), Star Rating: Role of Sales Person at Retail Outlets in Promoting the Benefits, Seventeenth AIMS International Conference on Management, pp. 1231-1233, ISBN: 978-1-943295-14-2.

Afsal E.M. (2020), A Study on Entrepreneurial Intention and Career Mobility: Among MSME Entrepreneurs in Kerala, Seventeenth AIMS International Conference on Management, pp. 413-416, ISBN: 978-1-943295-14-2

Rajesh K., (2020), 'Regional Comprehensive Economic Partnership Negotiations and India-Do we really miss the opportunity'?, *Southern Economist*, (ISSN: 0038-4046), pp.7-8, Vol.58, No.17, January 2020.

Rajesh K (2020), "Kovidanandhara Keralam", (Kerala: Post Covid 19), (ISBN: 9789354081613), pp.162-168), 2020 in a Malayalam book entitled as "Kovid Kalam: Anubhavam, Vicharam, Vicharana", edited by Ashraf P.C. and Jaleel Padanna, Sahora Books, Padanna.

Rajesh K (2020), "Marunna Indian Karshika Mekhala: Oru Samakalika Avalokanam" (*Changing Indian Agriculture Sector: A Contemporary Analysis*) (ISBN:9788194696308), pp.44-58, 2020 in the Malayalam book entitled as "Marunna India: Nayangal, Parishkarangal" edited by Jomon Mathew and Pradeep C., Cormetrics Technologies, Thiruvananthapuram.

b) Popular Press articles

Rajesh K, (2020) , "Adrishyakarathinu Shakthi Pakaran Oru Smithian Aparatha" (Union Budget Analysis), appeared in the editorial page of Maathrubhumi News Paper on 3rd, February, 2020.

Rajesh K , (2020), “*Aayasarahitha Jeevitham Sadhyamavumo*” (Is it Possible to be Hustle free life), appeared in the editorial page, Mathrubhumi News Paper on 6th July, 2019

Rajesh K,(2020), “*Marende Thiranjeduppu Nadathippu*” (Don't we need to change the Election Procedure?), appeared in the editorial page, Mathrubhumi News Paper on 17th May, 2019.

Rajesh K , (2020), 'KIIFB's Masala Bond Issue: A Derailed Debate', Madhyamam English Online edition, dated May 4th 2019

Rajesh K,(2020), “*Virus Akramanam: Navaloka Nirmithikku Vaathil Thurakkumbol*” (Virus Attaach: Opportunity for a New World Order”, pp. 12-14, Mathrubhumi GK & Current Affairs, (Mal.), May, 2020.

Rajesh K, (2020), “*Vipanikku Shakthi Pakarumbol*”, (Strengthening the Financial Market), pp.28-30, Mathrubhumi GK & Current Affairs, (Mal.), March, 2020.

Rajesh K,(2020), “*Prathisandhikkalathe Bank Layanam*”, (Bank Merger during the time of Economic Turmoil), pp.10-14, Mathrubhumi GK & Current Affairs, (Mal.), October, 2019

Rajesh K, (2020), “*Avasaram Kaathu Cheruppakkarude Rajyam*”, (Youngster's Country is Waiting for Opportunities”, pp.16-18, Mathrubhumi GK & Current Affairs, (Mal.), July, 2019

ii. Major activities of the department

Being the Department for Business and Management, used to organize Management meet, industry visits and talk by eminent industrialists in various fields. A glimpse of the same is given below.

a.Management meet: Waves

The first edition of the Management Fest, which was entitled as “WAVES 2015”, organized by the students of MBA program was held on 30th October 2015. The Hon'ble Vice Chancellor Dr. B. Madhusudan Kurup inaugurated the ceremony. One hundred participants from sixteen South Indian colleges attended the fest. The second edition was held on 27th and 28th October 2016. On 30th October, Department of Business Administration and Management of SME conducted its third inter collegiate Management Fest “WAVES 2K17”. WAVES 2K17 had events relating to the core areas of management like Business Quiz, Best Manager, Finance Game, HR Game, Marketing Game and also non-management events such as Treasure Hunt, Spot Dance and 3's Football.



b. Industry visits

- Students of the 2014 Batch (Rural Management) organized a visit to Kudumbasree District Mission, and GCDA, Kochi.

- 2015 Batch organized three industrial visits to the following industries;

Kerala Feeds Ltd. Thrissur on 2-04-15,

CIFT, Cochin on 23-04-15 and

MILMA, Thripunithura on 30-06-2015.

- MBA 2015 Batch went for a 3 day industrial visit to Ooty, Mysore, and Bangalore from 9th to 12th March, 2017. On the first day, they visited the Dodabetta Tea factory at Cooncoor, which produces 30 tonnes of tea powder per month. They went to Soaps and Detergent Ltd, (Mysore sandals) on 11th, a company owned by the government of Karnataka which is set up for sandal wood oil extraction. They concluded their industrial visit by visiting Karnataka silk factory where they were introduced to several silk processing and weaving process by experts in each area. They also went to see Visvesraya Industrial and Technological museum, Bangalore (VITM). VITM is a constituent unit of council of science museum (NCSM), ministry of culture, Government of India. The museum is a treasure chest of science and technology.



- MBA 2017 Batch visited Anna Aluminium and KITEX Garments Kizhakkambalam, Mithradam Renewable Energy Centre, Aluva, Traco Cable Company Limited, Irumbanam, Hindustan Machine Tools (HMT), Kalamassery and CIAL (Cochin International Airport Limited, Nedumbassery as part of their industrial visit during the month of September and October, 2017.



C. Invited lectures/talks and training programs

- A workshop was organized on 27th June 2015 for curriculum development of MBA Energy Management
- Students were given a session on Transactional Analysis by Mr. Joby Cyriac, Assoc. Professor, Marian College, Kuttikkanam, on 28th July 2015.
- Department initiated and launched **Entrepreneurship Development (ED) Club “TESLA”** on June 2015, for developing the business ideas and dreams of students. The club will help students develop their business ideas in areas of fisheries, agri business, food production, value addition, fish processing, marine drugs etc.
- Students and faculty attended a workshop on Marine Ecosystems and Climate Change in India organized by Kerala University of Fisheries and Ocean Studies and Nansen Environmental Research Centre on 30–31 of July, 2015 at Ramada Resort, Cochin.



- **SKILL ENHANCEMENT TALK SERIES:** It was officially inaugurated on 2nd February 2018 at Seminar Hall, School of Management and Entrepreneurship by Prof. (Dr.) M. S. Raju (Dean, Fisheries & Director, School of Management and Entrepreneurship). Prof. Dr. V Ambilikumar presided over the function and Sri. P.J. Xavier, President of Junior Chamber International (JCI) Cochin Chapter, was the chief guest. Budding entrepreneurs of Department of Business Administration and Management attended an informative session on “How Prepared Are You for Business Management” which was organized as part of skill enhancement talk series by the department, at seminar hall, SME, KUFOS on 2nd February 2018. Mr. Samir Dayal Singh (Founder of Humble Innovations) was the chief mentor. As part of weekly skill enhancement talk series, the third session was dealt by Mr. Sarath TR on 19th February 2018. Mr. Hafiz Aslam Asst. Prof. Department of Maritime Law, SME, KUFOS handled the fifth session of Skill Development Talk Series on 13th March 2018 at Seminar Hall, SME, KUFOS. The session was on stock trading.
- SME, KUFOS observed World Sleep Day incorporating the slogan, 'Join the Sleep World, Preserve Your Rhythms to Enjoy Life'. Dr. P Shobha from V P S Lakeshore Hospital, Panangad took a half day session for students and emphasized the importance of a healthy sleep for a healthy living.
- As part of the World Investor week, we have organized a session for our PG students on the topics “Plan and Invest According to Your Needs and Goals” on 30th September, 2019 by Mr. Anadhu K Shaji, Deputy Manager, National Stock Exchange of India Ltd, Business Development Head, Kerala.
- **Students of MBA 2017 Batch attended a session on Women Empowerment through Entrepreneurship organised by Centre for Advanced Studies and Research in Entrepreneurship Development (CASRED), KUFOS as part of International Women's Day on 07-03-2018.**

iii. Achievements of the Faculty Members

Almost all faculty members of the school served in expert panels of various examinations including PhD and syllabus restructuring bodies. Some of them are mentioned below.

Dr. V.Ambilikumar served as a member at Academic Council and Senate of Cochin University of Science and Technology during 2015 to 2018.

Dr. V.Ambilikumar was a resource person in Malayala Manorama on Coastal Protection held on 29th May 2015.

Dr. V.Ambilikumar was the resource person for a session on Research Methodology at Academic Staff College, Karyavattom on 15th March 2017

Dr. V Ambilikumar served as the expert in Workshop on BBA and B.Sc. Hotel Management- Syllabus Revision Committee on 2nd Feb. 2017.

Dr. V Ambilikumar served as the External expert for the pre submission seminar of Ph.D thesis on 6th May 2017, University of Kerala.

Dr. V Ambilikumar conducted Viva Voce Exam. Of MBA students on 14th & 15th July 2017 at CONSPI Academy of Management studies, CUSAT.

Dr. V Ambilikumar served as the External expert for the pre submission seminar of Ph.D thesis on 21st Oct. 2017 University of Kerala.

Dr. V Ambilikumar served as the External expert in the ASC meeting on MBA Admission at Thiruvananthapuram on 8th Nov. 2017

Dr. V Ambilikumar served as the External expert for conducting Viva Voce exam. of M.Phil studemnts of University of Kerala on 13th Nov. 2017

Dr. V Ambilikumar served as the External expert for the pre submission seminar of Ph.D thesis on 8th Dec. 2017 University of Kerala.

Dr. V Ambilikumar served as the External expert for conducting Viva Voce exam. of Ph.D studemnts of Kannur University 22nd & 23rd Jan. 2018.

Dr. V Ambilikumar served as the External expert for conducting Viva Voce exam. of M.Phil studemnts of CUSAT on 29th Jan. 2018

Dr. M.S. Raju, was the Convener of ASC-KUFOS Workshop on Syllabus Modernisation of MBA Programmes in Kerala held at KUFOS on 10th and 11th November 2016. The workshop was organized jointly by the Admission Supervisory Committee, Govt. of Kerala and KUFOS



Dr Afsal E.M. is serving as a Member of Review Panels of Advances in Economics and Business, Horizon Research Publishing, USA; Journal of Applied Economics, The University of Warwick, United Kingdom; and Amity Journal of Management Research (AJMR)

Dr Afsal E.M. is serving as a Member, PG Board of Studies (Management and Business Studies), MG University.

Dr Rajesh K has served as a Resource Person for a Webinar and delivered a talk on “Farmers Story in India” jointly organized by the Department of Economics, S.H. College, Chalakkudy and the Department of Economics, AKI's Poona College of Arts, Science and Commerce, Pune, Maharashtra on 23rd December, 2020.

Dr Rajesh K has served as a Resource Person for a Webinar and delivered a talk on “Farmers Bills-2020” organized by the Department of Economics, Nirmala College, Muvattupuzha, Kerala on 8th October, 2020.

Dr Rajesh K has served as a Resource Person at the One Day National Webinar on “India and its

Neighbourhood in Contemporary Times: Economic and Political Perspectives” jointly organized by the Department of Economics and Department of Political Science, Christ College (Autonomous), Irinjalakuda on 28th August, 2020.

Dr Rajesh K has served as a Resource Person for an International Webinar and delivered a talk on Impact of Covid 19 on Return Migration and the Foreign Remittance in India, organized by the Govt First Grade College, Vijayanagara, Bangalore on 15th June, 2020.

Dr Rajesh K has served as a Resource Person for a national Webinar and delivered a talk on Post Covid 19 World Order: Uncertainties and Expectations, organized by the Payyannur College, Payyannur on May 27th 2020.

Dr Rajesh K has served as a Resource Person for an International Webinar and delivered a talk on Impact of Covid 19 on Return Migration and the Foreign Remittance in India, with Special Reference to Kerala, organized by the Little Flower College, Guruvayoor on 20th May, 2020.

Dr Rajesh K has served as a Resource Person for a talk on “Career Options for Economics Graduates”, at the PG Department of Economics, St Aloysius College, Elthuruth, on 24th February, 2020.

Dr Rajesh K has delivered an extension lecture on Union Budget at the Department of Economics, Nirmala College, Muvattupuzha on 13th February, 2020.

Dr Rajesh K has delivered an extension lecture on Union Budget at the PG and Research Department of Commerce and Management Studies, of C.Achuthamenon Govt College, Thrissur on 10th February, 2020.

Dr Rajesh K has delivered an invited talk on Union Budget 2020-21 at the Department of Economics, St Mary's College, Thrissur on 5th February, 2020.

Dr Rajesh K has delivered an extension lecture on Union Budget 2019-20 at the Department of Economics, Christ (Autonomous) College, Irinjalakuda, on 3rd February, 2020.

Dr Rajesh K has delivered a talk on “Prospects and Challenges of Blue Economy with a Special Reference to India”, at MES Asmabi College, Kodungallur on 27/01/2020.

Dr Rajesh K has delivered an extension lecture on the topic, “Dynamics of Indian Economy and the Growth Slowdown”, at Sree Narayana College, Nattika on 17/01/2020.

Dr Rajesh K has delivered an extension lecture on Union Budget 2019-20 at the Department of Economics, Dr B.R. Ambedkar Memorial Govt Arts and Science College, Balussery, Kozhikode on 1st August, 2019

Dr Rajesh K has delivered an extension lecture on Union Budget 2019-20 at the Department of Economics, University of Calicut, Dr John Matthai Centre, Aranattukara, Thrissur on 12th July, 2019.

Dr Anoop K.K. has attended a three day National Level workshop on SPSS and its application; at the Nodal office of Christ deemed to be University, Thiruvananthapuram, from 14th to 16th November, 2019.

Dr Rajesh K has participated in the Five Day Faculty Development Programme in Behavioral Economics, organized by the Department of Economics, St Berchmans College, Changanassery, Kerala in collaboration with the Kerala State Higher Education Council on August 22 to 26, 2020.

Dr Rajesh K has participated in a Refresher course on Research Methodology for Faculty of Social Sciences organized by the Human Resource Development Centre (HRDC), University of Hyderabad during 20th July 2020 to 1st August, 2020 and obtained grade 'A'.

Dr Rajesh K has participated in a Faculty Development Program conducted by the Entrepreneurship Development Institute of India at Kerala Forest Research Institute (KFRI) from 21.12.2019 to 03.01.2020.

iv. Students Achievements

a. PhD Awarded

Thesis Title	Name of the student	Name of the supervising Faculty Member
Study on Influence of online advertisements on the buying behavior of FMCG Consumers in Kerala	Ambili K.P.	Dr V.Ambili Kumar
The Impact of Psychological Contract Breach among Bank Employees in Ernakulum District, Kerala	Mr.Sabu Varghese	Dr M.S.Raju
Perception of online consumers towards luxury products: A Study with reference to young professionals in Kerala	Mr Jithin Benedict	Dr M.S.Raju

b. Best Paper Awards

Mr. Bejoy Joseph, who is a research scholar under the guidance of Prof. Dr. V.Ambilikumar at SME KUFOS has presented a paper at International Research Symposium on Service Management, organized by International Journal of Service Management. This journal is published by Emerald. This event was hosted by Murdoch University, Dubai. He received the Young Service Researcher Award with cash prize of 500 Dollars. The event was held from 6th of October and wrapped up with presentation of awards on 9th of October 2019.



Mr. Bejoy Joseph (left) receiving the Award for Young Service Researcher Award with cash prize of 500 Dollars



Mr. Jithin Benedict, research scholar, under the guidance of Dr M.S.Raju, SME, received the Best Paper Award for his presentation on "The Influence of Price Consciousness on the Purchase Intention of Online Luxury Products." at the National Conference on Invasion of Technology in Marketing and Society 2019 organized by Viswajothi School of Management Studies, Vazhakulam.

• Mr. Jithin Benedict, research scholar, under the guidance of Dr.M.S.Raju, SME, received the Best Paper Award for his presentation on “The Influence of Price Consciousness on the Purchase Intention of Online Luxury Products.” at the National Conference on Invasion of Technology in Marketing and Society 2019 organized by Viswajothi School of Management Studies, Vazhakulam.



SME-2015-51-03

c. UGC/NET holders

The following students of the Department of Business Administration and Management, SME were qualified in the UGC NET examination



AMRUTHA T
SME-2017-21-22



ANEESHA MOL K.S.
SME-2017-21-01



SNEHA STANLY
SME-2018-21-33

d. Other Achievements

Ms. Anjana (Adm. No. 2017-21-42), MBA (Energy Management Student secured scholarship worth Rs. 100,000 and participated in the IGCS Summer School (*Smart Grids – Electricity Networks as the Backbone of a Carbon Neutral Society*) organised by Technical University Dresden, Germany. The course was open to German and Indian Master and Ph.D. Students in academic fields of engineering, environmental and social sciences (specialization in

sustainable development is desirable). Knowledge in the field of electrical engineering and power grids is of advantage. The number of participants is limited to a maximum of 30 (15 German / 15 Indian).

Anandakrishna Dayal K & Geeja K.J of MBA 2018 Batch, presented a paper titled “Adoption of Google pay among youth: An application of Technology Acceptance Model (TAM)” at 6th National Conference on Banking and Finance (NCBF-2019) On 15th October, 2019 organized by Marian International Institute of Management, Kuttikanam, Kerala.

Vishnu K.B & Yadhukrishnan K of MBA 2018 Batch, presented a paper titled “A study on customer relationship management in banking: An empirical study ” at 6th National Conference on Banking and Finance (NCBF-2019) On 15th October, 2019 organized by Marian International Institute of Management, Kuttikanam, Kerala. They also secured the best paper award with a certificate and cash award.



Yadhukrishnan K.



Vishnu K.B.

Four Ph.D. Scholars, Asha Vijay T., Dhanya T. S., Fiona Sheenu Francis and Liya Peter, attended five days International Workshop on Research Methodology in Social Sciences: Multivariate analysis using SPSS and AMOS jointly organised by Department of Commerce, Economics and Statistics, Government College, Tripunithura, and sponsored by Directorate of Collegiate Education, Government of Kerala, during 26th to 30th, November 2019

Research scholars Asha Vijay T. and Fiona Sheenu Francis attended three- day National workshop on Effective Theory Building and Testing using Structural Equation Modelling for Social Sciences organised by DDU Kaushal Kendra, Cochin University of Science And Technology during 19th to 21st, December 2019 at DDUKK, CUSAT.

A team of four students won second prize in Re-engineering case study competition conducted by NIT Trichy. The case study was on the firm 'Suguna Foods', which is one of the leading firms in poultry industry. About thirteen teams were selected for the final round presentation and our team was the only team selected from Kerala

Students and faculty attended a workshop on Marine Ecosystems and Climate Change in India organized by Kerala University of Fisheries and Ocean Studies and Nansen Environmental Research Centre on 30– 31 of July, 2015 at Ramada Resort, Cochin. Students

Students participated in a national seminar on GST Reforms: Implications for States, organized by K M Mani Centre for Budget Studies, CUSAT on 7th September 2015.

Mr. Sanu K S secured first prize for adapting competition in “Blue Ocean 2015” Management Fest organized by Kerala Agricultural University Mannuthy, Thrissur on March, 2015

MBA 2017 batch students Aneeshamol K.S, Jincy Jacob, Najeena P. N and Reedhu V bagged second prize for She Entrepreneur program in Tandav 2k17, Management fest organized by Sacred Hearts College, Thevara on 2nd February, 2018. They also received an amount of Rs.8000/- as cash award.

MBA 2017 batch students Jincy Jacob, Najeena P. N and Reedhu V won third prize for Scraps Aukzio program in Enero 2k18, Management fest organized by Chinmaya College of Arts, Commerce and Science, Tripunithura on 7th February, 2018. They also received an amount of Rs.1500/- as cash award.

MBA 2017 Batch Students Jayadev K Remesh, Amrutha T, Dini Ross James, Najeena PN secured Third Prize for HR Game in CALIC 2K17, Management Fest, organized by Mar Augusthinos, Pala on 17th of February, 2017. They also received an amount of Rs.2000 as cash award.

MBA 2017 Batch students Helen Kodiyattil, Temin Andrews, Najeena P N & Ashish P Girish got first prize for HR GAME in AGORA 2k17 Management Fest Organised By Ilahia School Of Management, Muvattupuzha, Ernakulam, on 16 & 17 of November 2017. They also received an amount of Rs 15000/- as cash prize.

MBA 2017 Batch student Helen Kodiyattil, Temin Andrews, Najeena P N & Rijoy Thomas bagged third prize for HR GAME in EUPHORIA 2017, Management Fest organized by Sahrdaya College Of Advanced Studies, Thrissur on 21 & 22 November 2017.

MBA 2017 Batch Student Najeena PN won the Best debater award for Debate competition in All Kerala Inter Collegiate Debate Competition 2018 for Prof. E Antony Issac Memorial Ever Rollin Trophy organized by St. Pauls College, Kalamaserry, Kochi on 8th March 2018

MBA 2017 Batch Students Najeena P N and Arunkumar P S received third prize for Debate competition in All Kerala Inter Collegiate Debate Competition 2018 for Prof. E Antony Issac Memorial Ever Rollin Trophy organized by St. Pauls College, Kalamaserry, Kochi on 8th March 2018. They also received an amount of Rs. 1000/- as cash award

MBA 2017 Batch student Najeena P N & Suryamol S Got Second prize for Debate competition in LUMIERE 2K18, National Techno Cultural Fest organized by Govt. College Of Engineering, Kottayam on 23rd of February 2018. They also received an amount of RS 1000/- as cash prize.

MBA 2017 Energy Management Batch students attended APQI Power Quality Seminar organized by SEEM, Society of Energy Engineers and Managers at KMA hall Kochi on 21st February 2018. The Seminar mainly focused on Power Quality and Energy Management. One day seminar featured talks by different speakers on Power Quality Problems and Solutions and Dynamic Reactive Power Control.

MBA 2017 Energy Management Batch students attended 'Machinery Expo Kerala 2018' at the Jawaharlal Nehru International Stadium Ground here from January 12 to 15, organised by the Department of Industries and Commerce. Students could meet machinery manufacturers and suppliers in various sectors, which was a one-stop shop to display the latest manufacturing solutions, as well as promote MSMEs. Various research institutes and entrepreneurs participated in the expo and showcased new technologies in the field of agriculture, food processing, Ayurveda and plastic

MBA 2017 Energy Management Batch students attended ENCON 2017 organized by Energy Conservation Society at Little Flower Engineering Institute, Kalamassery. It was a three day conference cum exhibition related to energy systems from January 12 to 14, 2018. The conference included technical sessions, paper presentations and panel discussions related to energy management.

MBA 2017 Energy Management Batch students attended APQI Power Quality Seminar organized by SEEM, Society of Energy Engineers and Managers at KMA hall Kochi on 21st February 2018. The Seminar mainly focused on Power Quality and Energy Management. One day seminar featured talks by different speakers on Power Quality Problems and Solutions and Dynamic Reactive Power Control.

MBA 2017 Batch students attended GREEN POWER EXPO 2K17, organized by KREEPA, Kerala Renewable Energy Entrepreneurs' and Promoters' Association at Bolgatty Palace and Island resort on 24, 25, 26 October 2017. The Green Power Expo 2017 mainly focused on the topic, *green energy for smart living*. The 3-day expo featured renewable energy exhibition, technology conference and talks by national and international speakers. This was organised in association with and supported by the ministry of new and renewable energy, Government of India, KSEB, Skill Council for Green Jobs (SCGJ) and Suchitwa Mission.

Students of MBA 2017 Batch attended a session on Women Empowerment through Entrepreneurship organized by Centre for Advanced Studies and Research in Entrepreneurship Development (CASRED), KUFOS as part of International Women's Day on 07-03-2018.

Students of MBA 2017 Batch attended "Entrepreneurship Awareness Programme organised by Centre for Advanced Studies and Research in Entrepreneurship Development (CASRED), KUFOS, on 21st March 2018.

MBA 2017 Batch students along with two faculty members Sri. Govind S Menon and Dr. Mariya T Cheeran visited Anna Aluminium and KITEX Garments Kizhakkambalam, Mithradam Renewable Energy Centre, Aluva, Traco Cable Company Limited, Irumbanam, Hindustan Machine Tools (HMT),

Kalamassery and CIAL (Cochin International Airport Limited, Nedumbassery as part of their industrial visit during the month of September and October, 2017.



MBA 2017 Batch Student Najeena P N won the Best debater award for Debate competition in All Kerala Inter Collegiate Debate Competition 2018 for Prof. E Antony Issac Memorial Ever Rollin Trophy organized by St. Pauls College, Kalamassery, Kochi on 8th March 2018

MBA 2017 Batch Students Najeena P N and Arunkumar P S received third prize for Debate competition in All Kerala Inter Collegiate Debate Competition 2018 for Prof. E Antony Issac Memorial Ever Rollin Trophy organized by St. Pauls College, Kalamassery, Kochi on 8th March 2018. They also received an amount of Rs. 1000/- as cash award

MBA 2017 Batch student NAJEENA P N & SURYAMOL S got Second prize for Debate competition in LUMIERE 2K18, National Techno Cultural Fest organised by Govt. College Of Engineering, Kottayam on 23rd of February 2018. They also received an amount of RS 1000 /- as cash prize

MBA 2017 Energy Management Batch students attended 'Machinery Expo Kerala 2018' at the Jawaharlal Nehru International Stadium Ground here

from January 12 to 15, organised by the Department of Industries and Commerce. Students could meet machinery manufacturers and suppliers in various sectors, which was a one-stop shop to display the latest manufacturing solutions, as well as promote MSMEs. Various research institutes and entrepreneurs participated in the expo and showcased new technologies in the field of agriculture, food processing, ayurveda and plastic



MBA 2017 Energy Management Batch students attended ENCON 2017 organised by Energy Conservation Society at Little Flower Engineering Institute, Kalamassery. It was a three day conference cum exhibition related to energy systems from January 12 to 14, 2018. The conference included technical sessions, paper presentations and panel discussions related to energy management.

There are 25 students participated and 15 students volunteered in the 38th annual National Management Convention, flagship event of Kerala Management Association, which was based on the theme "Managing Work, Managing Life-The Global Aspiration of Young India" held on 7th and 8th March 2019 at International Convention Centre, Le Meridien, Kochi, Kerala.

A group of students of 2017-19 launched a startup venture Flower kart which aims to provide customer oriented products according to the seasons.

Seven students of MBA 2017-18 batch (Krishna Chaitanya, Mohammed Hashim V.A., Jayadev K Remesh, Amal Raju, Dini Ross James, Mohammed Yasir, and Reagan Philip) participated in the Energy Audit of all street lights in all the 17 Municipalities of Kannur and Palakkad district.

Two students of 2017 batch of MBA (Amal Raju and AINU Joy) participated in the Indo-Swiss Building Energy Efficiency Camp, at Centre for Advanced Research in Building Science and Energy at CEPT University, Ahmedabad which was held from 16th to 23rd December.

As many as six students of MBA 2017-18 batch (Eldho Basal Joy, Jincy Jacob, Sarath S Kurupu, Muhammad Yasir, Radhu V, Anjana S Nair) too active participation in the Indo-German Centre for Sustainability-Winter School on Sustainable Waste Management-Municipal Solid Waste and E-Waste from 23rd February 2017 to 9th March, 2017 at IIT Chennai.

First semester students of 2018-19 academic year batch conducted an industrial visit on Sud Chemie India Private Limited, Edayar on 27th March, 2018

v. Other relevant points

KUFOS has signed a MoU with Manappuram Foundation. Based on which, three students from the general category and three students belonging to the fishermen community undergoing MBA programme are eligible to receive the **Manappuram Foundation** Scholarship. The amount of Scholarship is Rs.4000/- per month. This scholarship will be awarded on the basis of the eligible students in each semester.

B. DEPARTMENT OF ECONOMICS AND STATISTICS

The Department offers a Post Graduate Programme., in M.Sc. (Statistics). The intake capacity of the programme is 10 per year. A board of Studies for the Department was constituted in the year 2015-16. Twenty percent of the seats are reserved for the candidates from fisherfolk community. Two batches of M.Sc. (Statistics) are in progress.

I. Research Publications of Faculty members

Ambilikumar, V, Raju, M.S. and Sebastian Mathew (2016), The Changing Climate : Impact and Observations of Fisherfolk of Kerala, International Journal of Science, Environment and technology, Vol.5, No.6, pp.4147-4162. ISSN 2278-3687 (O) 2277-663X (P). 2016.

Veena Vijayan and Mathew Sebastian (2016). Statistical Modelling and Forecasting of

Fish Landings in India. International Conference on Science & Technology for National Development. (Abstract No. ASLS- C:4, P87.)

Veena Vijayan and Mathew Sebastian (2016). Statistical Modelling and Forecasting of Fish Landings in Kerala. 26th Swadeshi Science Congress (Abstract No. FS-58, P 150)

V. Viji ., K. C. Harish, Alphi Korath and M.S Sileesh., A Critical Analysis of Diet In seventeen deep sea fishes along the South-eastern Arabian Sea, *Indian J. Fish.*, 64(2): 17-21, 2017 DOI: 10.201077/ijf.2017.64.2.67233-03

Sileesh, Alphi Korath, Harish K., Viji V., Aswathy. M, Ronald FRICKE, First record of *Uranoscopus crassiceps* (Alcock, 1890) (Perciformes: Uranoscopidae) from off the Arabian Sea coast, south-western India. *Fish Taxa* (2017) 2(2): 76-81

Sileesh MULLASSERI, Alphi KORATH, Viji VIDYAN, Ronald FRICKE, Amritha SURESH, Harish CHANDRAN. First record of *Paratricanthodes retrospinis* Folwer, 1934 (Tetraodontiformes: Triacanthodae) from the Andaman Islands, northeastern Indian Ocean *Fish Taxa* (2017) 2(2): 76-81

M.S SILESH, K. ALPHI, K. C. HARISH AND V. VIJI. On the systematic of genus *Scylla* de Haan, 1833 of Cochin backwaters, a South Indian estuary Species assemblages and community structure of deep-sea demersal ichthyofauna of the South-eastern Arabian sea (SEAS). *Journal of Marine Biological Association of the United Kingdom*, page 1 of 7. © Marine Biological Association of the United Kingdom, 2017. Doi:10.1017/Soo25315417001151

P. Lakshmi Devi, Aneykutty Joseph, Anup Mandal, Alphi Korath. On the systematic of genus *Scylla* de Haan, 1833 of cochin backwaters, a South Indian estuary, *Journal Biodiversity Environmental Science (JBES)*, ISSN: 2220-6663, Vol.10, No. 2, p. 1-15, 2017.

Alphi Korath., Sileesh M.S., Viji V., Harish K.C., and Alphi Korath, Diet composition of Indian ruff (*Psenopsis cyanea* Alcock, 1890) from south-west coast of India, Paper presented in International Conference "Towards a Sustainable Blue Economy: Production, Strategies and Policies From 4-6th Feb, 2016

Harish K.C, Sileesh M.S., Viji V., Alphi Korath and Aswathy M.S., (2020), Spatial distribution and abundance of Deep-water brachyuran crab *Charybdis (goniohellenus) Smithi* (Macleay, 1838) in the shelf –break area of south west Indian EEZ., Paper presented in International Conference "Towards a Sustainable Blue Economy: Production, Strategies and Policies From 4-6th Feb, 2016

Viji V ., Sileesh M.S., Harish K.C., Aswathy M.S. and Alphi Korath, (2016), Distribution and Diet analysis of deep-sea spiny jaw green eye *Chlorophthalmus corniger* (Alcock, 1894) from the south-east Arabian Sea., Paper presented in International Conference "Towards a Sustainable Blue Economy: Production, Strategies and Policies From 4-6th Feb, 2016

Sagar Sampada. Sileesh M.S., Harish K.C, Viji V., Aswathy M.S. and Alphi Korath, (2020), A study on distribution, abundance, length- weight relationship and food of Moontail bulls eye (*Priacanthus hamrur* Forskal, 1775) inhabiting in the continental slopes beyond 200m depth in the south-east Arabian sea during the research expeditions, Paper presented in International Conference "Towards a Sustainable Blue Economy: Production, Strategies and Policies From 4-6th Feb, 2016

ii. Faculty/students Achievements

Sri.Mathew Sebastian, Associate Professor is continuing as Head of the Department since 05.06.2017 and co-ordinating the MSc (Statistics) programme. He is also holding the charge of Head of the Department of Fisheries Engineering under the Faculty of Fisheries from 01.02.2018.

Sri.Mathew Sebastian, Associate Professor is a member in the Senate, Academic Council, PG Board of Studies and many academic and administrative committees of KUFOS.

Sri.Mathew Sebastian, Associate Professor and the students of MSc (Statistics) attended a Webinar on “Diagnostics and Remedial Measure for Common Errors in Application of Statistics” organized by the Department of Agricultural Statistics, College of Agriculture, Navsari Agricultural University, Gujarat during 20 – 21, October 2020.

Sri.Mathew Sebastian, Associate Professor participated in the International Conference on Aquatic Resources and Blue Economy (AQUABE 2019) organized by KUFOS during 28 – 30, 2019.

Sri.Mathew Sebastian, Associate Professor participated in the one day workshop on “Script Writing” organized by KUFOS on 01.10.2018.

Sri.Mathew Sebastian, Associate Professor participated in the Winter School on “Application of Advanced Statistical Tools in Agricultural Research (ASTRA) sponsored by ICAR and organised by the Department of Agricultural Statistics, UAS, Dharwad, Karnataka

during 08-28 November 2016.

Sri.Mathew Sebastian, Associate Professor Co-ordinated the session on “Applications of Statistics in Life Sciences” in the International Conference on 'Science and Technology for National Development' organized by Indian Science Congress Association, Cochin Chapter at KUFOS on 25th and 26th October 2016.

All the students of MSc (Statistics) attended the International virtual workshop on ' Distribution Theory and its Applications' from 13.12.2020 to 15.12.2020 followed by the sixth International Conference on “Statistics for Twenty-first Century – 2020” (ICSTC 2020) during 16-19, 2020.

Students of MSc (Statistics) and Sri.Mathew Sebastian, Associate Professor participated in the two-day online workshop on “Applied Statistics” organized jointly by the Department of Economics & Statistics, Thrissur and Department of Statistics,, Sri.C.Achutha Menon Govt.College, Thrissur in connection with World Statistics Day on 19th and 20th October 2020.

Three students of M.Sc. (Statistics) attended the National workshop on “Official Statistics-Indian Context” organized by the Centre for Population Studies, Department of Statistics, Cochin University of Science & Technology on 20.10.2015

Nine students of M.Sc. (Statistics) participated in the two-day Faculty Development Program on “Data Analysis to Data Science –Management Perspective” at Bhavan's Royal Institute of Management, Cochin from 05.10.2016 to 06.10.2016.

Three students of M.Sc. (Statistics) attended the National workshop on “Advanced Statistical Tools and Softwares for Biological Research” at M.G. University, Kottayam from 27.09.2016 to 01.10.2016

Four students of M.Sc.(Statistics) were awarded KUFOS Junior Fellowship for the Academic year 2016.

Ms.Veena Vijayan, M.Sc.(Statistics) student presented papers in the International Conference on Science & Technology for National Development held at KUFOS on 25-26 Oct.2016 and in the 26th Swadeshi Science Congress held at CMFRI, Cochin on 7-9, Nov.2016.

Four students of 2019 batch M.Sc. (Statistics) attended the three-day National Workshop on “Statistical Data Analysis using R and SAS” sponsored by the Directorate of Collegiate Education, Government of Kerala and organized by the post graduate & Research Department of Statistics, Maharaja's College, Ernakulam during 25-27 September 2019.

C. DEPARTMENT OF LEGAL STUDIES

The Department offers a Post Graduate Programmes in L.L.M. (Maritime Law). The course was launched in the Academic Year 2013-14. The intake of the course is 10 per year. A Board of Studies for the Department was constituted during the year 2014-15. Ph.D. Programme is also started in the Department since 2014-15. Twenty percent of the seats are reserved for the candidates from fisher folk community.

i. Publications of Faculty Members

Ashamol, “Legal frame work of initial public offering (IPO) grading in protection of investors” in *journal of international academic research for multidisciplinary* Impact Factor 2.417, ISSN: 2320-5083, Volume 3, Issue 9, October 2015

Ashamol, “Role of physical education in child development” in *journal of international academic research for multidisciplinary* Impact Factor 2.417, ISSN: 2320-5083, Volume 3, Issue 9, October 2015

Ashamol, “Socio-economic status and family influence on sports performance among university level women cricket players” in *journal of international academic research for multidisciplinary* Impact Factor 2.417, ISSN: 2320-5083, Volume 3, Issue 9, October 2015

Ashamol, “Socio-economic status and family influence on sports performance among university women basketball players” in *journal of international academic research for multidisciplinary* Impact Factor 2.417, ISSN: 2320-5083, Volume 3, Issue 9, October 2015

Ashamol, “Understanding corporate social responsibility with problems and perspectives” in *Journal of International Academic Research for Multidisciplinary (JIARM)* Impact factor 1.625, ISSN: 2320-5083, volume 3, Issue 8, September 2015

Ashamol, “Arrest of Ships in Arbitration Claims: An Analysis of Indian Law” in *Journal of International Academic Research for Multidisciplinary (JIARM)* Impact Factor 1.625, ISSN: 2320-5083, Volume 3, Issue 7, August 2015

Ashamol, “Consumer Protection Through labeling Genetically Modified Foods” in *Journal of International Academic Research for Multidisciplinary (JIARM)* Impact Factor 1.625, ISSN: 2320-5083, Volume 3, Issue 6, July 2015

Ashamol, “Dowry Harassment and the Indian Penal Code: A Search for New Imperatives” in *Journal of International Academic Research for Multidisciplinary (JIARM)* Impact Factor 1.625, ISSN: 2320-5083, Volume 3, Issue 5, June 2015

Ashamol, “Impact of Globalisation on Legal education and access to Justice” in *Journal of International Academic Research for Multidisciplinary (JIARM)* May 2015 Impact Factor 1.625, ISSN: 2320-5083, Volume 3, Issue 4, May 2015.

Ashamol, “An Analysis of insider trading and its Regulation ”in *Journal of International Academic Research for Multidisciplinary (JIARM)* April 2015 Issue at page 282-291.

Diversity and community structure of Deep-sea Demersal Perciforms of South-East Arabian Sea. Sileesh M.S., Alphi Korath , Harish K.C, Viji V., and Aswathy M.S. , Paper presented in the 'Marine Biodiversity and Bioprospecting for sustainable Livelihood' National seminar 21-22nd March 2016, Cochin, India

Sadasivan Nair (2015), presented a Paper on “Indian Fisheries Laws in the Wake of the United Nations Convention on the Law of the Sea” An international Seminar Organized by World Ocean Science Congress & KUFOS on 5-8 February 2015

Sadasivan Nair (2015), presented a paper on “Indian Law on Arrest of Ships for Security for Transnational Maritime Arbitration Claims” organized by School of Legal Studies CUSAT on February 2015

Sadasivan Nair (2015), presented a paper on “Mergers and Acquisition: Reasons for the failure” UGC National seminar Organized by School of Legal Studies CUSAT on March 5-7 March 2015

ii. Major activities of the Department

a. Invited talk

Invited Lecture by John Menezes on maritime Law



Invited Lecture by Mr. Nainan of F.C.I.P.Ltd
Invited Lecture by Adv .Shyam Kumar V.M on maritime Law
Invited Lecture by From Cochin Institute of International Arbitration
Invited Lecture by Mr Madhu of United Arab Shipping Company

b. Industrial Visit / Internship

- Students and Faculty of Department of Legal Studies went for the cruise on October 12th

2018. Going in the Nefertiti cruise ship was the greatest experience of all time for the students of LLM .We navigated through 12 nautical miles and saw the beautiful ocean. We also saw the separation of the sea



- Students and Faculty of Legal department visited Marine merchandise department, Kochi situated at Willington Island on 22/11/2019 and had lecture by Mr Ajith Sukumaran and Adv Vivek.
- Both Faculty and LLM students visited Cochin Port Trust and we had interaction and classes conducted by the port officers on legal and Technical aspects of port administration

iii. Achievements of the faculty members

- Dr Sadasivan Nair Adjunct Professor acted as Member of Board of Paper setters for UGC NET Examination
- Dr Sadasivan Nair, Adjunct Professor Acted as Question paper setter for UG and PG and Phd at CUSAT, Calicut and MG University
- Ashamol V, Assistant Professor served as the Question paper setter for UG at CUSAT

- Dr Sadasivan Nair, Adjunct Professor participated in syllabus revision committee of one year LLM Programme at NUALS
- Ashamol V Assistant Professor participated as a passing Board member at CUSAT

iv. Students achievements

Staff strength	Professor	:	Nil
	Associate Professor	:	Nil
	Assistant professor	:	Nil
	Adjunct faculty		2
	Contract/Guest faculty:		Contract-2,
Student strength	LLM (I year)	:	10
	LLM (II year)	:	11
	PhD	:	3

Plan for the current academic period

Conduct of LLM (Maritime) programme at KUFOS and Ph.D programme at the research Centre (Govt. Law College, Ernakulam) under KUFOS. Course work for Ph.D. students will be held during the current academic year.

1. Application for Professor Chair in maritime law submitted to the MHRD
2. Visit to various maritime Centers

Details of Departmental meeting conducted with agenda:

1. School Governing Council meeting was held on 25-10-2017
2. Only school level meeting was held.

Conference/Seminar/Workshop/Invited lectures organized by the Department:

1. Invited Lecture by Mr Madhu of United Arab Shipping Company
2. Invited Lecture by Adv Shyam kumar

Academic achievements of Faculty :

1. pro.(Dr) Sadasivan Nair Participated as Resource person in National seminar Conducted by CUSAT and Govt law college
2. pro.(Dr) Sadasivan Nair Participated as Resource person in National seminar Conducted by Govt Law College, Ernakulam
3. Ashamol presented a paper on "compulsory insurance" in the Seminar conducted by Govt Law College Ernakulam on Maritime Law
4. Ashamol attended the Seminar conducted by Justice V R Krishnair Chair on Human Rights Conducted by SLS, CUSAT

- 5 Hafiz Aslam presented a paper on India look beyond Foreign Institutional Investor conducted by ACV Associates(ICAI)
- 6 Hafiz Aslam presented a paper on independent director: Paradigm shift in Corporate Governance conducted by Wisdom Associates(ICAI)

Academic achievement of Students:

1.MERIT SCHOLARSHIP

Two students of Department of Legal Studies,SME received merit scholarship from Prof. A. Ramachandran, Hon'ble Vice Chancellor during the merit evening ceremony 2017, which was organized on 23rd June 2017.

Capacity building of Staff and Students

1 Both Senior and Junior batches of LLM students conducted Study Tour to major ports in Sreelanka



2 Both Faculty and Students of LLM visited Kunjalimarakkur Engineering at CUSAT

3 Both faculty and Students visited MMD at Cochin

1. REPORT OF STUDENTS RECRUITMENT DEVELOPMENT PROGRAMME

Three of our passed out students working as Assistant professors in various Law colleges and National Law School all others are practicing lawyers at Kerala High Courts and Various Subordinate Courts

Academic/Research/Extension activities of Faculty outside the University

- 1 Pro(Dr) Sadasivan Nair Adjunct Professor acted as Member of Board of Paper setters for UGC NET Examination
 - 2 Pro(Dr) Sadasivan Nair,Adjunct Professor Acted as Question paper setter for UG and PG and Phd at CUSAT, Calicut and MG University
 - 3 Ashamol V ,Assistant Professor Acted as Question paper setter for UG at CUSAT
- Meetings attended by faculty members outside the University
- 1 Pro(Dr) Sadasivan Nair,Adjunct Professor participated in syllabus revision committee of one year LLM Programme at NUALS
 - 2 Ashamol V Assistant Professor participated as a passing Board member at CUSAT

FACULTY OF FISHERIES – DEPARTMENT OF AQUACULTURE

Staff strength	Professor	: Dr. Shyama
	Associate Professor	: Dr. K. Dinesh (Head of the Department)
	Assistant Professor	: Dr. Chiranjiv Pradhan
		: Dr. Binu Varghese
	Adjunct faculty	:
	Contract/Guest faculty	: Dr. Rachel Fernandez
Student strength	B.F.Sc	: 1 st year-
		: 2 nd year-
		: 3 rd year-
		: 4 th year-
	MFSc/ M Sc (I year)	:
	MFSc/ M.Sc (II year)	:
	PhD	:01

Plan for the current academic period

Details of Departmental meeting conducted with agenda

Four meetings

1. Student allocation for Post-Graduation for various guides
2. Fund allocation to various labs
3. Collecting inputs for ICAR report
4. Discussion the floods of Kerala 2018 to analyze the losses for Aquaculture farmers.

Conference/Seminar/Workshop/Invited lectures organized by the Department

1. Fish Farmers day on 10-07-2017
2. One Day Workshop on Fisheries and Aquaculture Development of the Malabar Region, Kerala on 3rd August 2018 at the KUFOS Regional Centre, Payyannur, Kannur.
3. International Seminar on Recent Trends in Best Management practices of Aquaculture, 25th November 2017 at KUFOS.
4. Department of Aquaculture has organized open day celebration.
5. Department has conducted one day seminar on Mangroves and its importance on Mangrove day.

Academic achievements of Faculty

- **Dinesh K:** Science Communicator of Indian Science Congress held in Tirupati 2017.
- **Dr. Dinesh K** participated and delivered a lecture on Shrimp Farming in the seminar organized by Kerala Aqua Farmers' Federation at Alappuzha on 31-10-2017.

- **Dr. Dinesh K** participated and presented a paper in the National Consultation Meet on “Intensification of *Macrobrachium rosenbergii* culture in India: Status, Constraints and the way forward” on 27-29 July 2017 at CUSAT.
- **Dr. Dinesh K** participated in the National Seminar; Fostering Innovations in Fisheries and Aquaculture: Focus on Sustainability and Safety, 11th Indian Fisheries and Aquaculture Forum, 21 - 24 November, 2017, Kochi, India hosted by Asian Fisheries Society (Indian Branch) and ICAR Central Institute of Fisheries Technology.
- **Dr. Dinesh K** participated in EU-India Water Cooperation, organized by Delegation of European Union and Government of India on 30th November, 2017.
- **Dr. Dinesh K** participated in World Food India -2017 organized by Ministry of Food Processing Industries, Government of India (3rd to 5th November, 2017).
- **Dr. Dinesh K** participated and presented a paper in the National Seminar on Perspective Aquaculture Plan of Kerala by Govt. of Kerala.
- **Dr. Dinesh K** participated in the International Workshop on Mahseer Conservation, 5-6 April 2017 at Kochi.
- **Dr. Dinesh K** was an invited participant and speaker in Ocean Dialogue 2017 organized by Kingdom of Netherlands and Observer Research Foundation held at Trivandrum on 19-21 April 2017.
- **Dr. Dinesh K** organized a Special Session on “Improving seafood consumption in India” in 11th Indian Fisheries and Aquaculture Forum.
- **Dr. Dinesh K** is a Special Invitee of the Expert Committee for Special Package for overall development of “Okhi” affected fisher folk formulated by Govt. of Kerala.
- **Dr. Dinesh K** was the Convener of International Seminar on Recent Trends in Best Management practices of Aquaculture, 25th November 2017 at KUFOS.

Academic achievement of Students

1. Ms. Chandana Dinakaran secured 'Second rank' in the All-India level ranking for Best Fisheries Graduate of India (BFGI) examination 2017-18.
2. Ms. Anjali G Menon & Raghi Rappayi awarded prestigious Erasmus Mundus Scholarship in 2017.
3. 10 students went Malaysia for paper presentation.

Capacity building of Staff and Students

- **Dr. K. Dinesh** has given advisory services to more than 100 farmers during the period in various fields of aquaculture including shrimp culture, tilapia culture, aquarium fish culture, aquaponics
- **Dr. K. Dinesh** has started a trial *Penaeus vannamei* culture in four ponds to demonstrate the farming protocols to the farmers and students.
- Under the light of the severe floods faced by the State in 2018 August, **Dr. K. Dinesh** has mooted a project under KUFOS Aided Research Project to assess the loss of aquaculture farmers and analyze the situation towards formulating a climate smart aquaculture strategy for the State.
- Approximately 500 students from various schools and colleges visited the Department during the period who were given preliminary awareness on aquaculture showing the field facilities by **Dr. K. Dinesh**.

- **Dr. K. Dinesh** has Supported many farmers and Organizations for identifying the fish seeds brought from other States for stocking in the farms of Kerala.
- **Dr. Rejish Kumar V.J** has attended National Training Programme on '**Application of molecular techniques in aquatic food quality analysis**' conducted by Department of Fish Quality Assurance and Management, Fisheries College and Research Institute, Tamil Nadu Fisheries University, Thoothukudi from 14-03-2017 to 23-03-2017 under the ICAR-Niche Area of Excellence in Fish Safety and Quality Assurance. (10 days)
- **Dr. Rejish Kumar V.J** has attended ICAR sponsored short term training programme on “**Development and Characterization of Fish Cell lines for Biotechnological Application**” conducted by Central Institute of Fisheries Education (CIFE) Mumbai from 1-2-2018 to 10-2-2018. (10 days)
- **Dr. Binu Varghese** has attended a workshop on 'Biofloc Technology' by Dr. Yoram at University of Kerala, Thiruvananthapuram 6-8 March 2018.
- **Dr. Binu Varghese** has attended Orientation Programme of National Service Scheme Programme Officers at Rajagiri College, Kalamassery Empanelled Training Institute from 17 to 23 January 2018.
- **Dr. Binu Varghese** has attended training programme on 'Breeding Seed Production and Growout Farming of Genetically Improved Farmed Tilapia (GIFT)', 24-28th April 2017, at Vijayawada, Andhra Pradesh.
- **Dr. Binu Varghese** has participated in the International aquashow and seminar AquaAquaria 2017 Mangaluru, Karnataka from 14-16 May 2017 organised by MPEDA, Govt. of India.
- **Dr. Binu Varghese** has participated in the training cum aquafarmer meet organised by MPEDA on 'Diversification of Aquaculture and Sustainable Farming Practices', 18/8/2017, Vallarpadom, Kochi.
- **Dr. Binu Varghese** has participated in workshop on Next Generation Sequencing and its applications in fisheries and agricultural sciences for beginners held at CMFRI, Kochi during 7th-8th Nov, 2017 Organized by CMFRI, Kochi in association with Agrigenome Labs, Kochi.

Research achievements and publications of Staff and Students

- Awareness on mangrove-based fisheries- A case study among women fisher folk of Puduveypu area, Cochin, India. **Dinesh, K.**, Geeji, M.T. and Chinchu, E.R. Book of abstracts, pp-496
- Socio-economic resilience of fisher women through dry fish trade -A case study from Puduveypu. Geeji, N.T., Chinchu, E.R. and **Dinesh, K.** Book of abstracts, pp-501
- Recent trends in bass farming in Andhra Pradesh: Farmer's perspective, Satvik Kalapala, S.Belsare, **K. Dinesh**. Book of abstracts, pp-282
- Role of trout on the livelihood of high land population of Jammu and Kashmir: Present and Future, Pankaj Gargotra, K. Heankhe and **Dinesh, K.** Book of abstracts, pp-281
- Effect of formulated dietary supplements on the lipid profile in *Labeo rohita*, Kamcha Heankhe, G.H. Pailan, N.P. Sahu, A.K. Pal, W.S. Lakra, and **Dinesh K.** Book of abstracts, pp-275
- Effect of dietary methionine supplementation on growth of Rohu fingerlings, *Labeo rohita*, Nilima Priyadarshini, H. Shivananda Murthy, S. Himansu, and **Dinesh, K.** Book of abstracts, pp-271
- Mohanta, K.N., Rath, S.C., Nayak, K.C., **Pradhan, C.**, Mohanty, T.K., Giri, S.S. (2017). Effect of restricted feeding and refeeding on compensatory growth, nutrient utilization and gain, production performance and whole-body composition of carp cultured in earthen ponds. *Aquaculture Nutrition*. 23 (3): 460-469
- Rath S.C., Nayak, K.C., **Pradhan, C.**, Mohanty, T.K., Sarkar, S., Mohanta, K.N., Paul, B.N., Giri, S.S.

(2017). Evaluation of Processed Rain Tree (*Samanea saman*) Pod Meal as a Non-conventional Ingredient in the Diet of *Catla catla* Fry. *Animal Nutrition and Feed Technology*. 17 : 323-332

- Rath, S.C., Nayak, K.C., **Pradhan, C**, Mohanty, T.K., Sarkar, S., Toppo, S., Mohanta, K.N., Giri, S.S. (2017). Evaluation of polanga (*Calophyllum inophyllum*) oil cake as a non-conventional ingredient in *Labeo rohita* (Hamilton, 1822) fingerling feed. *Indian Journal of Fisheries*. 61 (Special Issue): 75-82

Academic/Research/Extension activities of Faculty outside the University

- **Dr. K. Dinesh** has initiated a field level consultancy project funded by M/S. Kemin Industries South Asia Pvt. Ltd., Chennai to help the industry and the farming community.
- **Dr. K. Dinesh** has submitted a feasibility proposal on freshwater aquaculture to Mr. Abdulla AbdullazizKhashabi, from Qatar for which the client paid an amount of Rs. 2 lakhs to the University.

Meetings attended by faculty members outside the University

Sl.No Name of the faculty and details of meeting attended

1. **Dr. Dinesh K** participated and delivered a lecture on Shrimp Farming in the seminar organized by Kerala Aqua Farmers' Federation at Alappuzha on 31-10-2017.
2. **Dr. Dinesh K** participated and presented a paper in the National Consultation Meet on "Intensification of *Macrobrachium rosenbergii* culture in India: Status, Constraints and the way forward" on 27-29 July 2017 at CUSAT
3. **Dr. Dinesh K** participated in the National Seminar; Fostering Innovations in Fisheries and Aquaculture: Focus on Sustainability and Safety, 11th Indian Fisheries and Aquaculture Forum, 21-24 November, 2017, Kochi, India hosted by Asian Fisheries Society(Indian Branch) and ICAR Central Institute of Fisheries Technology.
4. **Dr. Dinesh K** was an invited participant and speaker in Ocean Dialogue 2017 organized by Kingdome of Netherlands and Observer Research Foundation held at Trivandrum on 19-21 April 2017.
5. **Dr. Chiranjiv Pradhan** has attended ICAR sponsored short term training program on "Development and Characterization of Fish Cell Lines for Biotechnological Applications", conducted by Central Institute of Fisheries Education, Mumbai, India on 1-10th Feb-2018.
6. **Dr. Chiranjiv Pradhan** has participated in Advanced training in Aquaculture Nutrition and Feed Technology organized by Central Institute of Brackish Water Aquaculture, Chennai, India on 19th-28th January 2017.
7. **Dr. Binu Varghese** has participated in 'Ornamental Fish Culture' to farmers as part of One day training programme in connection with krishi Unnathi Mela on 17.3.2018 at KUFOS.

DEPARTMENT OF AQUATIC ANIMAL HEALTH MANAGEMENT

ACTIVITY REPORT 2017-18

School/ Faculty		: Faculty of Fisheries
Department		: Aquatic Animal Health Management
Staff strength	Professor	: 1
	Associate Professor	: -
	Assistant professor	: -
	Adjunct faculty	: -
	Contract/Guest faculty	:2

Student strength	B.F.Sc / B.Tech – year wise	
	MFSc/ M Sc (I year)	:7
	MFSc/ M.Sc (II year)	: 5
	PhD	: Five (Four PhD scholars

registered with Faculty of Ocean Studies, KUFOS and one PhD scholar registered with MG University working in the Department of AAHM under the supervision of Professor & Head, AAHM)

Details of Departmental meeting conducted with agenda: Weekly meetings held with the research staff

Conference/Seminar/Workshop/Invited lectures organized by the Department:

Sl No	Sem/Conf/ Training/ Workshop	National/ International/ State level/ Regional	Title of the event, date/duration	Faculty -in-charge of the prog and Department	Funding agency and amount	Total No of participants National & International
1.	Awareness programme for farmers	Regional Kannur	Emerging diseases in aquaculture, with special emphasis on IMNV was delivered to the farmers. 23/3/2017	Dr. Devika Pillia AAHM NSPAAD.	NFDB	25
2.	Awareness programme for farmers	Regional Chittumala Kollam	'Emerging diseases in aquaculture, with special emphasis on IMNV' and discussion on scientific health management was organized 28/3/2017	Dr. Devika Pillia AAHM NSPAAD	NFDB	78

3.	Hands on Training for State Fisheries Department officials	State level	5 days Hands on training in aquatic Animal Disease Surveillance & Diagnosis 5/9/2017-9/9/2017	Dr. Devika Pillai AAHM	NFDB	20
4.	Hands on Training for State Fisheries Department officials for 6 days	State Level	Aquatic animal disease diagnosis & Preventive management 13/11/2017-18/11/2017	Dr. Devika Pillai AAHM	State Fisheries department	24

Academic achievement of Students

- Five students successfully completed MFSc program in Aquatic Animal Health Management
- Sevok Handique (MFSc 2015 batch) secured the first rank and won the Gold Medal for MFSc in AAHM.

Capacity building of Staff and Students

- MFSc students of 2017 batch (7 nos.) attended the five days hands on training programme in Fish Cell Culture Techniques (Sponsored by DBT) at CAH College, Vellore, Tamil Nadu on October 5-10, 2017
- Keerthana K.M. & Asha Gopan, MFSc students of 2017 batch attended the International seminar on Recent Trends in Best Management Practices of Aquaculture November 25, 2017

Research achievements and publications of Staff and Students

Achievements

- NFDB funded project on 'Establishment of Aquatic Animal Health and Environment Management Laboratory' successfully established and dedicated to the public.
- NFDB funded project on 'National Surveillance Programme for Aquatic Animal Diseases being carried out in the State of Kerala
- Training manual on Disease Diagnosis and management

I. Papers Presented:

1. Divya.V.Haridas(SRF) & Devika Pillai. "Probiotic potential of quorum quenching bacteria isolated from fish culture pond and gastrointestinal tract of *Oreochromismossambicus*". In: 11th Indian Fisheries & Aquaculture Forum on the topic of "Fostering innovations in Fisheries & Aquaculture, focus on sustainability & safety" conducted on November 21-24, 2017
2. Sneha KG (SRF) & Devika Pillai. "Antibiotic resistance pattern in environmental bacterial isolates: An overview". In: 11th Indian Fisheries & Aquaculture Forum on the topic of "Fostering innovations in Fisheries & Aquaculture, focus on sustainability & safety" conducted on November 21-24, 2017
3. Pillai, D., Gopi, S. and Rakesh C.G. (2017) Isopod infestation in freshwater fish farms: A cause for concern. In: International Symposium on Aquatic Animal Health and Epidemiology for Sustainable Asian Aquaculture. Organized by ICAR-NBFGR, Lucknow on April 20-21, 2017. Abstract Page No. 83.

Meetings attended by faculty members outside the University

- Attended the SOFTI Executive meeting and Annual General Body meeting at CIFT, Kochi

Academic/Research/Extension activities of Faculty outside the University

Dr. Devika Pillai served as Resource person in the following training programmes

1. Technical training program organized by Export Inspection Agencies (EIA) Cochin on the topic "Diseases in fish and shellfish aquatic diseases identification symptoms and their treatments" on 20-04-2017
2. Technical training program for 30 ornamental fish at NIFAM Aluva. Topic handled "Fish health management" on 6-12-2017 and on 20-01-2018
3. Training program organized by Department of Fisheries at Training Center Kadungallore (NIFAM, Aluva) on the topic "Fresh water fish diseases" on 22-01-2018
4. Technical training program for 30 ornamental fish farmers on 21-02-2018 at NIFAM Aluva. Topic handled- Ornamental fish health management
5. Technical training program for 20 fisheries department officials on the topic "RAS and closed system farming of shrimp" at NIFAM Aluva. Topic handled shrimp disease management on 24 -2-2018
6. Technical training program for 30 farmers on the topic "Fish health Management" at NIFAM Aluva on 24 -2-2018.
7. Skill development program on shrimp farming for 50 farmers at NIFAM Aluva on 6/01/2018 on Shrimp health management

Placement Cell Bulletin

- Ms. SaliniGopi(MFSc 2013) batch got placed as Agricultural extension officer at Canara Bank
- Ms. SreerenjuHariharan(MFSc 2014 batch) got placed as Executive assistant (Technical) in National Fisheries development Board, Hyderabad
- Mr. HemantaPokhrel (2013 batch) working as SRF in the National Surveillance Programme for Aquatic Animal Diseases

Department in news

The facility was inaugurated on 13/11/2017 by the Honourable Minister for Fisheries, Harbour Engineering and Cashew Industry of the state, Smt. J. Mercykuttyamma. The facility was dedicated to the aquafarmers of the state on the day as it was the World Fisheries Day. The Hon. Member of Parliament Dr. K.V.Thomas and Hon. Member of Legislative Assembly Adv. M. Swaraj also graced the function. A video film was made on the occasion and shown during the function. The news report of the facility prominently appeared in all the leading newspapers and on television. The youtube link of the video is <https://youtu.be/w3dkV3bxPr4>

**Inauguration of Aquatic Animal Health and Environmental Management Lab (13/11/2017)
by Smt. J. Mercy Kuttyamma, Hon. Minister for Fisheries, Harbour Engineering and
Cashew Industry of the state.**



Hon. Minister interacts with Students



Visit of Important Dignitaries to the AAHEM laboratory



Dr. J.K Jena DDG (Fisheries),
ICAR visiting the labs



Inauguration of training programme for
Fisheries department staff



Feedback of trainees



Dr. C.V Mohan, World Fish Centre, Malaysia and
delegation from Bangladesh visiting the AAHEM lab facility



Release of training manual



കുറോസിൽ മത്സ്യ രോഗ നിർണയ ലബോറട്ടറി

കുറോസിൽ, സംസ്ഥാനത്ത് മത്സ്യ രോഗ നിർണയ ലബോറട്ടറിക്ക് ഉദ്ഘാടനം. പ്രധാനമന്ത്രി മുഖേന പ്രസിഡൻ്റ് ജി.പി.എസ്. മായാമ്മയുടെ അദ്ധ്യക്ഷതയിൽ ഉദ്ഘാടനം. മന്ത്രി സ്മൃതി കാർത്യായനി ഉദ്ഘാടനം. മന്ത്രിയുടെ അദ്ധ്യക്ഷതയിൽ ഉദ്ഘാടനം. മന്ത്രിയുടെ അദ്ധ്യക്ഷതയിൽ ഉദ്ഘാടനം. മന്ത്രിയുടെ അദ്ധ്യക്ഷതയിൽ ഉദ്ഘാടനം.



മത്സ്യരോഗ നിർണയം: കുറോസിൽ

കുറോസിൽ, മത്സ്യ രോഗ നിർണയ ലബോറട്ടറിക്ക് ഉദ്ഘാടനം. പ്രധാനമന്ത്രി മുഖേന പ്രസിഡൻ്റ് ജി.പി.എസ്. മായാമ്മയുടെ അദ്ധ്യക്ഷതയിൽ ഉദ്ഘാടനം. മന്ത്രി സ്മൃതി കാർത്യായനി ഉദ്ഘാടനം. മന്ത്രിയുടെ അദ്ധ്യക്ഷതയിൽ ഉദ്ഘാടനം. മന്ത്രിയുടെ അദ്ധ്യക്ഷതയിൽ ഉദ്ഘാടനം.



മത്സ്യ രോഗ നിർണയം: കുറോസിൽ

കുറോസിൽ, മത്സ്യ രോഗ നിർണയ ലബോറട്ടറിക്ക് ഉദ്ഘാടനം. പ്രധാനമന്ത്രി മുഖേന പ്രസിഡൻ്റ് ജി.പി.എസ്. മായാമ്മയുടെ അദ്ധ്യക്ഷതയിൽ ഉദ്ഘാടനം. മന്ത്രി സ്മൃതി കാർത്യായനി ഉദ്ഘാടനം. മന്ത്രിയുടെ അദ്ധ്യക്ഷതയിൽ ഉദ്ഘാടനം. മന്ത്രിയുടെ അദ്ധ്യക്ഷതയിൽ ഉദ്ഘാടനം.

FACULTY OF FISHERIES

Department of Fisheries Resources Management

Staff strength	Professor	: Nil
	Associate Professor	: One
	Assistant professor	: Four
	Adjunct faculty	: Nil
	Contract/Guest faculty	: Nil
Student strength	MFSc (I year)	: 9
	MFSc (II year)	: 6
	PhD	: 3

Plan for the current academic period

Setting up of modernized PG lab and class room, Specimen storage room and to improve laboratory facilities of UG Lab Attempt will be made to prepare the inventory of the organism of Vembanad Lake, study the hydrobiology and fishery of Vembanad Lake system

Details of Departmental meeting conducted with agenda

Conducted three faculty meetings to review the academic and research activities of the Dept.

Conference/Seminar/Workshop/Invited lectures organized by the Department

Organised Vembanad fish count 2017 in collaboration with Ashoka Trust for Research in Ecology and Environment (ATREE) on 27-05-2017.

The Amazing world of miniature fishes. Invited Lecture by Dr. Ralf Britz, Head of Fish Section, British Museum of Natural History, London on 30.11.2017

Organised seminar on '**Fishes of kole wetlands**' in collaboration with college of forestry, Kerala Agriculture University, Thrissur and Kole birders, Trichur on 01-02-2018 at college of forestry, Kerala Agriculture University, Thrissur

Organised Kole wetland Fish count in collaboration with college of forestry, Kerala Agriculture University, Thrissur and Kole birders, Trichur on 2-2-2018 at college of Forestry, Kerala Agriculture University, Thrissur

Academic achievements of Faculty

1. Appointed as a **member of the Research Advisory Committee (RAC)** of the College of Forestry, Kerala Agricultural University (KAU), Thrissur
2. Nominated as a **Member of the International Advisory Board – 8th World Recreational Fishing Conference**, Victoria, Canada, July 16th to 20th 2017
3. Appointed as the **Guest Editor of Fisheries Research** (Elsevier): a high-ranking impact factor journal in the field of fisheries science

Academic achievement of Students

Kiranya B. MFSc (FRM) -2015 batch -Student Project proposal titled "Fish and shellfish biodiversity of Poonthura estuary- Spatial and temporal variations in accordance with environmental signatures" submitted to Kerala State Council Science, Technology and Environment -Approved and a grant of Rs.4000 sanctioned.

Capacity building of Staff and Students

Dr. K.J.Jayalakshmi and Dr. S Pramila participated in the ICAR sponsored summer school on “Advanced methods for fish stock assessment and fisheries management” held from 12th July 2017 to 1st August 2017 at CMFRI, Kochi

Dr. Rajeev Raghavan attended the 4 week long UGC Orientation Program at the Academic Staff College, Jawaharlal Nehru University (JNU), New Delhi. 31st July to 25th August 2017

Research achievements and publications of Staff and Students

Sajeevan M. K and B. Madusoodana Kurup (2016) Stock Assessment of cobia, *Rachycentron canadum* (Linnaeus, 1766) occurring in North West coast of India. *Indian Journal of Geo Marine Science* 45(3):378-387.

Sajeevan M. K. and B. Madusoodana Kurup (2016) Fecundity and spawning of cobia, *Rachycentron canadum* (Linnaeus, 1766) occurring in North West coast of India. *Indian Journal of Geo Marine Science* 45(8):933-936.

Sajeevan M. K. and B. Madusoodana Kurup (2016) Distribution and abundance of pelagic sting ray *Pteroplatytrygon violacia* (Bonaparte, 1832). *Indian Journal of Geo Marine Science* 45(12):1709-1713.

Sajeevan M. K. and B. Madusoodana Kurup (2016) Stomach content analysis of cobia, *Rachycentron canadum* (Linnaeus, 1766) occurring in North West coast of India. *Indian Journal of Geo Marine Science* 45(12):1631-1637.

Sajeevan M. K. and B. Madusoodana Kurup (2017) Live collection of cobia, *Rachycentron canadum* (Linnaeus, 1766) and assessment of its culture prospectus in Indian water. *Indian Journal of Geo Marine Science* 46(02):295-298.

Sajeevan M. K. and B. Madusoodana Kurup (2017) Age and growth of cobia, *Rachycentron canadum* (Linnaeus, 1766) occurring in North West coast of India. *Indian Journal of Geo Marine Science* 46(7):1390-1395.

Sajeevan M. K. and B. Madusoodana Kurup (2017) Maturity, spawning and feeding intensity of cobia *Rachycentron canadum* (Linnaeus, 1766) in northwest coast of India. *Iranian Journal of Fisheries* (Accepted).

Pramila S. And Lipton A.P. (2017). Immunisation trials on clownfish *Amphiprion sebae* against a potential pathogen, *Serratia marcescens*. *J. Mar. Biol.Ass. India*, 59(1): 28-31.

Kiranya B. and Pramila S. 2017. Fishery resources of poonthura estuary, a polluted sandbar estuary of Kerala. 11th Indian Fisheries and Aquaculture Forum (IFAF)- Fostering innovations in fisheries and aquaculture, Focus on Sustainability and safety. Hosted by Central Institute of Fisheries Technology at Cochin during 21-24 November, 2017. In: Book of abstracts.

Aruna Thomas and Pramila S. 2017. A preliminary assessment of meso and microplastic pollution in a sandy beach in Kerala. 11th Indian Fisheries and Aquaculture Forum (IFAF)- Fostering innovations in fisheries and aquaculture, Focus on Sustainability and safety. Hosted by Central Institute of Fisheries Technology at Cochin during 21-24 November, 2017. In: Book of abstracts

VK Anoop, N Dahanukar, A Ali & R Raghavan (2017) Taxonomy of the zodiac loaches, *Mesonoemacheilus triangularis*, *M. tambaraparniensis* and *M. periyarensis* endemic to the Western Ghats of India (Teleostei: Nemacheilidae). *Zootaxa* 4341 (1): 124–134.

A Keskar, R Raghavan, P Kumkar, A Padhye & N Dahanukar (2017) Assessing the sustainability of subsistence fisheries of small indigenous fish species: fishing mortality and exploitation of hill stream loaches in India. *Aquatic Living Resources* 30: 13

C Conte-Grand, R Britz, N Dahanukar, R Raghavan, R Pethiyagoda, HH Tan, RK Hadiaty, NS Yaakob & L Ruber (2017) Barcoding snakeheads (Teleostei: Channidae) revisited: discovering greater species diversity and resolving perpetuated taxonomic confusions. *PLoS One* 12 (9): e0184017.

SD Bower, R Raghavan, N Mahesh, AJ Danylchuk & SJ Cooke (2017) Inter-sectoral fisheries governance issues and solutions on the Cauvery River, India. pp 97-110 In: A.M. Song, S.D Bower, P. Onyango, SJ Cooke & R. Chuenpagdee (eds). *Intersectoral governance of Inland Fisheries*. TBTI Publication Series, E-01/2017, Too Big To Ignore - World Fish, St. John's, Canada. **Book Chapter**

R Raghavan, N Dahanukar & R Britz (2017) The type locality of *Tor mosal* (Hamilton 1822) (Teleostei: Cyprinidae). *Zootaxa* 4317: 593–596.

E Turak, I Harrison, D Dudgeon, R Abell, A Bush, W Darwall, CM Finlayson, S Ferrier, J Freyhof, V Hermoso, D Juffe-Bignoli, S Linke, J Nel, HC Patricio, J Pittock, R Raghavan, C Ravenga, JP Simaika & AD Wever (2017) Essential biodiversity variables for measuring change in global freshwater biodiversity. *Biological Conservation* 213: 272–279.

R Britz, E Adamson, R Raghavan, A Ali & N Dahanukar (2017) *Channa pseudomarulius*, a valid species of snakehead from the Western Ghats region of peninsular India (Teleostei: Channidae), with comments on *Ophicephalus grandinosus*, *O. theophrasti* and *O. leucopunctatus*. *Zootaxa* 4299(4): 529–545.

PD Rajan & R Raghavan (2017) Linking rivers, barrages and fish migration (Meeting Report). *Current Science* 112(9): 1804–1805.

SE Walton, HM Gan, R Raghavan, AC Pinder & A Ahmad (2017) Disentangling the taxonomy of mahseers (*Tor* spp.) of Malaysia: an integrated approach using morphology, genetics and historical records. *Reviews in Fisheries Science and Aquaculture* 25: 171–183.

P Sanjeevi, TT Ajith Kumar, R Raghavan, A Rhyne, M Tlusty & T Subramoniam (2017) Marine aquarium trade in India: challenges and opportunities for science and policy. *Marine Policy* 77: 120–129.

SD Bower, AJ Danylchuk, R Raghavan, SC Danylchuk, AC Pinder, AM Alter & SJ Cooke (2017) Involving recreational fisheries stakeholders in development of research and conservation priorities for mahseer (*Tor* spp.) of India through collaborative workshops. *Fisheries Research* 186(3): 665–671.

A Kanagavel, S Parvathy, N Nirmal, N Divakar & R Raghavan (2017) Do frogs really eat cardamom? Understanding the myth of crop damage by amphibians in the Western Ghats of India. *Ambio* 46: 695–705.

M. K. Sajeevan and B. Madusoodana Kurup (2017) Live collection of cobia, *Rachycentron canadum* (Linnaeus, 1766) and assessment of its culture prospectus in Indian water. *Indian Journal of Geo Marine Science* 46(02):295-298.

M. K. Sajeevan and B. Madusoodana Kurup (2017) Age and growth of cobia, *Rachycentron canadum* (Linnaeus, 1766) occurring in North West coast of India. *Indian Journal of Geo Marine Science* 46(7):1390-1395

M. K. Sajeevan and B. Madusoodana Kurup (2017) Maturity, spawning and feeding intensity of cobia *Rachycentron canadum* (Linnaeus, 1766) in northwest coast of India. *Iranian journal of Fisheries*.

Academic/Research/Extension activities of Faculty outside the University

Dr. MK Sajeevan

Participated and presented the report of “Vembnad fish count 2017” as Cruise leader organised by Ashoka Trust for Research in Ecology and Environment (ATREE) on 27-05-2017

Attended Project Appraisal and Monitoring committee meeting organized by the Ministry of Earth Science and presented research proposal before the Project Appraisal and Monitoring Committee during 11-12 January 2018 at INCOIS, Hyderabad.

Attended meeting of State action Plan on climate change organised by Directorate of Environment and Climate change on 09.10.2017.

Participated in the National Workshop on Tools for Monitoring, Assessment and management of Aquatic ecosystems conducted by the Centre of excellence in Aquatic Resource management and Conservation (CARMAC) and School of Ocean Science and Technology, KUFOS from 29th to 31st January 2018.

Attended as resource person in FMC meeting organized by Dept. of fisheries Trissur on 12.02.2018

Served as Question paper setter for B.F.Sc. Nautical Sciences, Fleet Management and Harbour Engineering and Marine Capture Fisheries Cochin University of Science and Technology

Dr S. Pramila

Participated in “Vembnad fish count 2017” organised by Ashoka Trust for Research in Ecology and Environment (ATREE) on 27-05-2017.

Participation and poster presentations in the 11th Indian Fisheries and Aquaculture Forum (IFAF) hosted by Central Institute of Fisheries Technology at Cochin during 21-24 November, 2017.

Dr. K.J Jayalakshmi attended

1. Summer School training programme on Advanced methods for fish stock assessment and fisheries management held at ICAR- Central Marine Fisheries Research Institute, Cochin, 12th July to 1st August, 2017
2. National Seminar on Marine Ecosystem Health 2017, 16-17, March 2017 organised by Dept. of Marine Biotechnology, Microbiology and Biochemistry, CUSAT
3. National workshop on mud banks of Kerala: Status, issues and societal concerns', organised here by the Council of Scientific and Industrial Research (CSIR)-National Institute of Oceanography, Regional Centre From 10th to 11th February 2017
4. Attended the Seminar on "Climate change and Sustainability of Ocean Resources held at Kochi on October 2017 in connection with the India International science Festival 2017 Conducted by Centre for Marine living Resources and Ecology, Ministry of Earth Sciences and Vijnana Bharati (ViBha)
5. Participated and presented a paper in the 11th IFAF held at Kochi on 21st to 24th November 2017
6. Participated in the National Workshop on Tools for Monitoring, Assessment and management of Aquatic ecosystems conducted by the Centre of excellence in Aquatic Resource management and Conservation (CARMAC) and School of Ocean Science and Technology, KUFOS from 29th to 31st January 2018.

Dr . Anvar Ali attended workshop on '**Fishes of kole wetlands**'- presented on 2-2-2018 at college of forestry, Kerala Agriculture University, Thrissur -- World wetland Day celebration.

Dr . Anvar Ali delivered Invited talk – '**Fishes and wetlands**' – Department of Zoology, Sacred heart College, Chalakudy - 6-2- 2018 – World wetland Day celebration.

1. Dr. Rajeev Raghavan delivered an invited talk at the **National Training Workshop on Tools for Monitoring, Assessment and Management of Aquatic Ecosystems**. Kerala University of Fisheries and Ocean Studies, 31st January 2018
2. Dr. Rajeev Raghavan delivered an invited talk at the **Inspire Internship Science Camp**. Sacred Hearts College, Thevara, Kochi, 11th January 2018
3. Dr. Rajeev Raghavan delivered an invited talk at the **National Seminar on Mainstreaming Biodiversity**. Department of Zoology, Maharajas College, Kochi, 14th December 2017
4. Dr. Rajeev Raghavan delivered an invited talk at **Mahseer 2017: International Workshop on Mahseer Conservation**. Mahseer Trust (UK) and the Kerala University of Fisheries and Ocean Studies (KUFOS), 5th and 6th April 2017
5. Dr. Rajeev Raghavan delivered an invited talk at **Dialogue on Identifying Pathways for Better Management of Brahmaputra Basin**. International Rivers & Legal Initiative for Forest and Environment (LIFE), Guwahati, India. 26th to 28th January 2017
6. Dr. Rajeev Raghavan delivered an invited talk at the **International Conference on Conservation of Humpbacked mahseer**. TATA Power, Lonavla, India on 10th January 2017
7. Dr. Rajeev Raghavan was the Convenor of the **Mahseer 2017: International Workshop on Mahseer Conservation**. Mahseer Trust (UK) and the Kerala University of Fisheries and Ocean Studies (KUFOS), 5th and 6th April 2017

Dr. Rajeev Raghavan was appointed the member of the International Advisory Board of the **8th World Recreational Fishing Conference**, Victoria, Canada, July 16th to 20th 2017

PhD Thesis Examiner – Mahatma Gandhi University

Appointed as **Member of the MFSc Advisory Committee** of Mr. Bibin Xavier, CIFE, Mumbai

Meetings attended by faculty members outside the University

Resource Person at the Workshop on Scientific Writing, Directorate of Research, Kerala Agricultural University (KAU), Thrissur, 23rd and 24th February 2018

Invited talk at the **Inspire Internship Science Camp**. Sacred Hearts College, Thevara, Kochi, 11th January 2018

Invited Talk at the **National Seminar on Mainstreaming Biodiversity**. Department of Zoology, Maharajas College, Kochi, **INDIA**, 14th December 2017

FACULTY OF FISHERIES : DEPARTMENT - FISH PROCESSING TECHNOLOGY

Staff strength	Professor	:	Nil
	Associate Professor	:	Nil
	Assistant professor	:	4
	Adjunct faculty	:	Nil
	Contract/Guest faculty	:	1
Student strength	MFSc (I year)	:	3
	MFSc (II year)	:	4
	PhD	:	11

Plan for the current academic period:

Details of Departmental meeting conducted with agenda

Conference/Seminar/Workshop/Invited lectures organized by the Department

Dr. Abilash Sashidharan and Dr. Blossom K.L

1. Two day training programme on “Production and Marketing of value added products from seafood” (28th and 29th December 2017) in association with Central Institute Of Fishery Technology, CIFT for 47 women participants at Kerala University of Fisheries and Ocean Studies , Panangad.
2. Two day training programme on “Production and Marketing of value added products from seafood” (27th and 28th April, 2018) for 47 women participants at Kerala University of Fisheries and Ocean Studies, Panangad.
3. Two day training programme on “Production and Marketing of value added products from seafood” (10th and 11th October 2018) at Kerala University of Fisheries and Ocean Studies Regional Centre, Payyanur for 15 women participants.
4. Two day training programme on “Production and Marketing of value added products from seafood” (13th and 14th December 2018) at Kerala University of Fisheries and Ocean Studies Regional Centre, Payyanur for 8 participants.

Academic achievements of Faculty: **Dr. Blossom K.L.**

- Guided MFSc student on the topic “Preliminary screening and process standardization of edible sausage casing from fish viscera” Submitted by Ancy Thomas., M.F.Sc.
- Attended 21 days ICAR sponsored winter school conducted by the Biochemistry and Nutrition division of CIFT, Kochi on the topic entitled “Marine nutrients for fighting malnutrition: Recent advances in marine biomolecules for human nutrition and healthcare” from 1/02/18 to 21/02/18

Dr. Safeena M.P**Research guidances as Major Guide**

Molecular characterization and evaluation of antibiotic susceptibility and biofilm forming capacity of pathogenic *Escherichia coli* isolated from seafood-Submitted by Sreesudha,N.V.,M.F.Sc. (AFP-2015-20-05)

- Phenotypic and genotypic characterization Of *Vibrio cholerae* associated with fresh seafood from the major markets of Cochin, India- Submitted by Larlyn Katharpi, M.F.Sc (AFP-2015-20-02)
- Attended winter school on the topic "Marine nutrients for fighting malnutrition: Recent advances in marine biomolecules for human nutrition and health care" organized by CIFT Cochin for a period of 21 days scheduled from 1st February 2018 to 21st February 2018.
- Participated in one day seminar on "Emerging techniques for safe Seafood during conducted on 19/12/2017 at School of Industrial Fisheries, CUSAT.

Dr. Abhilash Sasidharan**MFSC Guidance**

- Utilization of Isoelectric Precipitation/Solubilization (ISP) Technology as a Tool for The Recovery of Fish Protein Isolate (FPI) From Seafood Processing Waste- by Michu V. J.
- Standardization of process parameters for Surimi Based Pasteurised Crab Spread- by Seba T Jiso Thomas
- Process standardization for production of fish leather from Basa (*Pangasius hypophthalmus*) and comparison of quality parameters for development of value added products- by Megha P.

Trainings attended

1. Marine Stewardship Council, Level 2 Capacity Building Workshop on "**Working towards MSC Certification**" held at Kerala University of Fisheries & Ocean Studies, Kochi from 11th to 15th December 2018.
2. 21 days ICAR supported Centre of Advanced Faculty Training (CAFT) in Food Processing Training program on "**Food Safety and Quality Management of Food Products with reference to HACCP, Value addition & Quality standard**" from Sep 04-24,2018 at Banaras Hindu University, Varanasi, Uttar Pradesh.
3. 3 day training program on "**Food Safety Management System (ISO 22000:2018) with reference to Hazard Analysis Critical Control Points (IS 15000:2013)**" held during 13-15 September, 2018 at Centre of Food Science & Technology, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi, and Uttar Pradesh.
4. 13 days Faculty Development Program in "**Entrepreneurship Development**" from 5th to 17th March 2017, organized by Entrepreneurship Development Institute of India (EDII), Ahmadabad at Lead College of Management, Dhoni, Palakkad, Kerala India.

12 days National Training Program on "**Application of Molecular Techniques in Aquatic Food Quality Analysis**", conducted by the Department of Fish Quality Assurance & Management, School of Harvest & Post Harvest Technology, Fisheries College & Research Institute, Thoothukudi, from 14th to 23rd March 2017.

Participation in Workshops/Seminar/Symposia/Conference

1. International Conference on “**Recent Advances in Food processing Technology**” organized by Indian Institute of Food Processing Technology, Thanjavur, Tamil Nadu from 17th to 19th August 2018.
2. **11th Indian Fisheries and Aquaculture Forum**, 21-24 November 2017, Le Meridien, Cochin, India.

Classes conducted for training programs

1. Conducted a session on “**Production of value added seafood products and their marketing**” at two day training programme on “Production and Marketing of value added products from seafood” (27th and 28th April, 2018) organized by Department of Fish Processing Technology, KUFOS for 47 women participants at Kerala University of Fisheries and Ocean Studies, Panangad.
2. Conducted a session on “**Production of value added seafood products and their marketing**” at two day training programme on “Production and Marketing of value added products from seafood” (10th and 11th October 2018) organized by Department of Fish Processing Technology, KUFOS at Kerala University of Fisheries and Ocean Studies Regional Centre, Payyanur for 15 women participants.
3. Conducted a session on “**Production of value added seafood products and their marketing**” at two day training programme on “Production and Marketing of value added products from seafood” (13th and 14th December 2018) organized by Department of Fish Processing Technology, KUFOS at Kerala University of Fisheries and Ocean Studies Regional Centre, Payyanur for 8 participants.
4. Conducted a session on “**Production of value added seafood products and their marketing**” at two day training programme on “Production and Marketing of value added products from seafood” (28th and 29th December 2017) jointly organized by Department of Fish Processing Technology, KUFOS and Central Institute Of Fishery Technology, CIFT for 47 women participants at Kerala University of Fisheries and Ocean Studies, Panangad.
5. Conducted a session in three days training program (10.07.2017 to 12.07.2017) on “**Production of value added seafood products and their marketing**” at on “Diversification, problems and prospects of Aquaculture” organized by Directorate of Extension, Kerala University of Fisheries and Ocean Studies, Panangad.

Academic achievement of Students

- Project fellow of the plan project (PI- Dr. Blossom K.L) were sent for 10 days training on modern analytical methods in fish biochemistry from 10.01.17 to 21.01.17 at Biochemistry and Nutrition Division of CIFT, Kochi
- Two Project fellows of the plan project (PI- Dr. Safeena M.P) were sent for 10 days hands-on training on “Laboratory techniques for Microbiological examination of seafood from 06.02.17 to 18.02.17 at Microbiology, Fermentation and Biotechnology Division of CIFT, Kochi

Capacity building of Staff and Students

Conducted ELP programme for BFSC students 2013 Batch

Research achievements and publications of Staff and Students

Dr. Blossom K.L

- Published in KUFOS newsletter Challenger February 2017 edition on the topic “unethical/ toxic preservatives in fish samples”

- Abstract and poster presented in the 11th Indian Fisheries and Aquaculture Forum (11th IFAF) held at Cochin during 21-24 November 2017 on the topic “Preliminary screening and process standardization of edible sausage casing from fish viscera”
- Abstract and poster presented in the 11th Indian Fisheries and Aquaculture Forum (11th IFAF) held at Cochin during 21-24 November 2017 on the topic “Molecular characterization and evaluation of antibiotic susceptibility and biofilm forming capacity of pathogenic *E. coli* isolated from seafood”

Projects

- As Principal investigator in the plan project “**Development of Rapid Detection method for detecting the presence of unethical/toxic preservatives in fresh/chilled fish**” during the period 2016-17-Budget 14 lakhs
- As Principal investigator in the plan project “**Standardisation and development of value added products from tilapia (*Oreochromis mossambicus*)**” • As Co PI in the plan project “Development of rapid detection methods for detecting various pathotypes of *E. coli* from seafood based on their major virulent factors- Budget 14 lakhs
- As Co PI in the plan project “Model fish processing plant” State plan scheme

Dr. Safeena M.P

Project Handled as Principal investigator

- Development of rapid detection methods for detecting various pathotypes of *E. coli* from seafood based on their major virulent factors- State plan scheme 2016-17-Budget 14 lakhs- Completed

Development of Multiplex PCR for the detection of virulent factors in Enterohaemorrhagic *E. coli* (EHEC) from seafood-- State plan scheme 2017-18-Budget 17.5 lakhs- On going

Project Handled as Co PI- National Surveillance programme for Aquatic Animal Diseases –Funded by NFDB -76.43 Lakhs

- A Malayalam article entitled as “Matsya krishiyil Probioticukalude upayokam” was published in Jalakarshakan 10th Edition published by Association of fish farmers' Kerala.
- Abstract and **Poster presented** in 11th IFAF conference entitled as “Molecular characterization and evaluation of antibiotic susceptibility and biofilm forming capacity of pathogenic *Escherichia coli* isolated from seafood.
- Abstract and **Poster presented** in 11th IFAF conference entitled as "Preliminary screening and process standardization of edible sausage casings from fish viscera”

Dr. Abhilash Sasidharan

1. Sourav C., Michu V.J., Anjana Jose E. and **Abhilash Sasidharan**(2018).Recovery of protein from *Nemipterus Japonicus* (Thread Fin Bream) filleting waste using isoelectric solubilisation precipitation (ISP) technology.International Conference on Recent Advances in Food Processing Technology,IIFPT, Thanjavur Aug, 17 -19,2018.
2. Archana G., Seba T. Jiso Thomas, Nino Thomas M. and **Abhilash Sasidharan**(2018). Standardization of process parameters for Surimi based pasteurized Crab spread. International

Conference on Recent Advances in Food Processing Technology, IIFPT, Thanjavur Aug, 17 - 19, 2018.

3. **Abhilash Sasidharan**, Michu V. J., Chiranjiv Pradhan and Sabu S. (2017). Utilization of Isoelectric Precipitation/Solubilization (ISP) Technology as A tool for the recovery of Fish Protein Isolate (FPI) from seafood processing waste. Abstract submitted to 11th Indian Fisheries and Aquaculture Forum, 21-24 November 2017, Le Meridien, Cochin, India.

Academic/Research/Extension activities of Faculty outside the University

Dr. Blossom K.L

- Conducted a talk at All India Radio in the programme named “Swasthyam” on 27.06.17
- External examiner at St.Teresas College, Ernakulam for MSC Fourth Semester Practical Examination on 20.04.2017
- External examiner at St.Teresas College, Ernakulam for MSC Third Semester Practical Examination on 27.11.2017
- External examiner at St.Teresas College, Ernakulam for MSC Fourth Semester Practical Examination on 20.04.2018
- As resource person in the training programme conducted by Director of extension on the topic “Malsyathilae poshakagunangal”

Dr. Safeena M.P

As External Examiner outside the University

External examiner of M.F.Sc thesis evaluation of the Karnataka Veterinary Animal and Fisheries Sciences University, Bidar.

External examiner of M.F.Sc comprehensive viva voce of the Karnataka Veterinary Animal and Fisheries Sciences University (KVFSU), Bidar.

Setting of Question Paper other than University

Prepared two sets of question paper for Marine Microbiology course for the Faculty of Biological Sciences, Nitte University, Deralakatte, Mangalore-2017

Thesis Evaluation

Evaluated an M.F.Sc thesis entitled “Quality evaluation of hot smoked fillets and steaks of Mullet fish stored at different temperature”, submitted by Shihabudheen Machingal to Department of Fish Processing Technology, College of Fisheries, Mangalore, KVFSU, Bidar

Extension Activities

- Participated as resource person in the training conducted by the Director of Extension KUFOS, on the topic

- Conducted an awareness programme for farmers on the topic “**Emerging diseases in aquaculture with special emphasis on IMNV**” at Kannur on 21/03/2017.
- Conducted another awareness programme for shrimp farmers on the topic “**Emerging diseases in aquaculture with special emphasis on IMNV**” in Chittumala block office in Kollam district on 28/03/2017 and also organized a discussion **on scientific health management in aquaculture**.
- As a part of the project on National Surveillance programme for Aquatic Animal Diseases, with the objective of extending the networking to carry out effective surveillance and reporting in the state, a **hands- on training programme of five days** duration was conducted for the fisheries dept staffs. The training was conducted in two batches for ten officials each and five PG students. Fisheries dept officials of Alappuzha, Kannur, Ernakulam, Kollam, Pathanamthitta and thrissur districts were participated in the training programmes. The first training was conducted from 29th August to 2nd September²⁰¹⁶ and the second from 5th to 9th September 2016.

Dr. Abhilash Sasidharan

1. Member of the judging panel for the oral presentation session conducted as part of the International Conference on Food Processing Technology organized by St. Theresa's College, Kochi on 9th and 10th February 2018.
2. External examiner to conduct course-viva for the IV semester M.F.Sc (Seafood Safety and Trade) Degree Examination, School of industrial Fisheries, CUSAT on 10/05/2018
3. Member to conduct Passing board of M.F.Sc. IV sem. Program of School of industrial Fisheries, CUSAT on 06/06/2018.
4. Member to conduct Passing board of M.Sc. IV sem. Program of School of industrial Fisheries, CUSAT on 14/09/2017.
5. One day brainstorming work shop on Potential Collaboration in the area of **Food Science & Technology of relevance to Defense Forces** on 27th January, 2017 at **Defense Food Research Laboratory (DFRL), Mysore**.



Department in News: The news report of the facility in all the leading Malayalam newspapers

Academic Work Report 2017-2018

Academic Calendar of various PG and UG programmes was prepared and the same is furnished below.

KERALA UNIVERSITY OF FISHERIES AND OCEAN STUDIES

REVISED ACADEMIC CALENDAR FOR 2017 Batch B.F.Sc. PROGRAMME

Sl. No.	Events	2017 Batch Semester III	2017 Batch Semester IV	2017 Batch Semester V	2017 Batch Semester VI	2017 Batch Semester VII	2017 Batch Semester VIII
1	Reopening/commencement of classes	13.09.2018	06.03.2019	29.08.2019	19.02.2020	10.08.2020	08.01.2021
2	Last date of registration for the course (without fine)		13.03.2019	05.09.2019	26.02.2020	17.08.2020	15.01.2021
3	Last date of registration for the course (with fine)		20.03.2019	16.09.2019	04.03.2020	24.08.2020	22.01.2021
4	Last date of receipt of proposals for examination from Depts/ Schools along with syllabus, model QP, panel of setters/examiners with address, phone no., e-mail address and proposed time table without any change in the date of commencement of examination	15.10.2018	06.04.2019	30.09.2019	19.03.2020	—	—
5	Date and time of exam notification	15.10.2018	01.04.2019	01.10.2019	01.04.2020	—	—
6	Last date of receipt of filled up applications	31.10.2018	30.04.2019	31.10.2019	30.04.2020	—	—
7	Submission of attendance statement and continuous evaluation marks	13.02.2019	03.08.2019	29.01.2020	17.07.2020	—	—
8	Issue of nominal roll and hall tickets	14.02.2019	05.08.2019	30.01.2020	18.07.2020	—	—
9	Commencement of exams/ submission of dissertation	15.02.2019	06.08.2019	31.01.2020	21.07.2020	—	—
10	End of semester	05.03.2019	27.08.2019	18.02.2020	07.08.2020	07.01.2021	30.04.2021
11	Tentative date of publication of results	05.05.2019	27.10.2019	18.04.2020	07.10.2020	28.02.2021	30.05.2021
12		110	110	110	111	90	90

KERALA UNIVERSITY OF FISHERIES AND OCEAN STUDIES ACADEMIC CALENDAR FOR 2018 Batch PGPROGRAMMES

		2018 Batch Semester I	2018 Batch Semester II	2018 Batch Semester III	2018 Batch Semester IV
1	Reopening/commencement of classes	02.07.2018	19.12.2018	01.06.2019	02.12.2019
2	Last date of registration for the course (without fine)	-	26.12.2018	10.06.2019	09.12.2019
3	Last date of registration for the course (with fine)	-	03.01.2019	17.06.2019	16.12.2019
4	Last date of receipt of proposals for examination from Depts/ Schools along with syllabus, model QP, panel of setters/examiners with address, phone no., e-mail address and proposed time table without any change in the date of commencement of examination	30.07.2018	19.01.2019	01.07.2019	01.01.2020
5	1st Internal Examinations (To be conducted by the concerned School/Department)	13.08.2018	04.02.2019	15.07.2019	10.02.2020 to 17.02.2020
6	Date and time of exam notification	01.08.2018	01.02.2019	01.08.2019	01.02.2020
7	Last date of receipt of filled up applications, forwarded by HOD	31.08.2018	28.02.2019	31.08.2019	29.02.2020
8	2nd Internal Examinations (To be conducted by the concerned School/Department)	01.10.2018	18.03.2019	16.09.2019 to 24.09.2019	18.03.2020 to 25.03.2020
9	Online submission of attendance statement and continuous evaluation marks through KUFOS Suite	31.10.2018	12.04.2019	14.10.2019	15.04.2020
10	Issue of nominal roll and hall tickets	01.12.2018	13.04.2019	16.10.2019	17.04.2020
11	Commencement of exams/ submission of dissertation	03.12.2018	16.04.2019	17.10.2019	20.04.2020
12	End of the semester	17.12.2018	30.04.2019	31.10.2019	30.04.2020
13	Tentative date of publication of results	17.02.2019	30.06.2019	31.12.2019	30.06.2020
14	Number of working days (including examination days)	104	103	114	119

*May and November will be Vacation

** Time Table for internal examinations will be issued by the Concerned School/ Department as per the dates mentioned in the Academic Calendar

KERALA UNIVERSITY OF FISHERIES AND OCEAN STUDIES PROPOSED ACADEMIC CALENDAR FOR 2018 Batch B.Tech. (Food Technology)

PROGRAMME

Sl. No.	Events	2018 Batch	2018 Batch Semester I	2018 Batch Semester II
1	Reopening/commencement of classes	07.08.2018	23.01.2019	01.06.2019
2	Last date of registration for the course (without fine)	—————	30.01.2019	07.06.2019
3	Last date of registration for the course (with fine)	—————	06.02.2019	15.06.2019
4	Last date of receipt of proposals for examination from Depts/ Schools along with syllabus, model QP, panel of setters/ examiners with address, phone no., e-mail address and proposed time table without any change in the date of commencement of examination	31.10.2018	01.02.2019	01.07.2019
5	Date and time of exam notification	01.12.2018	01.03.2019	01.08.2019
6	Last date of receipt of filled up applications	15.12.2018	15.03.2019	16.08.2019
7	Online Submission of attendance statement and continuous evaluation marks through KUFOS Suite	03.01.2019	27.04.2019	11.10.2019
8	Issue of nominal roll and hall tickets	05.01.2019	30.04.2019	14.10.2019
9	Commencement of exams/ submission of dissertation	07.01.2019	02.05.2019	15.10.2019
10	End of semester	22.01.2019	15.05.2019	31.10.2019
11	Tentative date of publication of results Number of Working days in the semester (Including Examination Days)	07.03.2019 105	15.07.2019 109	31.12.2019 114

*May and November will be Vacation

** Time Table for internal examinations will be issued by the Concerned School/ Department as per the dates mentioned in the Academic Calendar

2018Batch Semester III	2018Batch Semester IV	2018Batch Semester V	2018 Batch Semester VI	2018 Batch Semester VII
02.12.2019	01.06.2020	01.12.2020	01.06.2021	01.12.2021
09.12.2019	08.06.2020	08.12.2020	08.06.2021	08.12.2021
16.12.2019	15.06.2020	15.12.2020	15.06.2021	15.12.2021
01.01.2020	01.07.2020	01.01.2021	01.07.2021	01.01.2022
01.02.2020	01.08.2020	01.02.2021	02.08.2021	01.02.2022
15.02.2020	18.08.2020	16.02.2021	16.08.2021	15.02.2022
08.04.2020	12.10.2020	10.04.2021	12.10.2021	12.04.2022
13.04.2020	14.10.2020	13.04.2021	13.10.2021	13.04.2022
15.04.2020	15.10.2020	15.04.2021	18.10.2021	18.04.2022
30.04.2020	31.10.2020	30.04.2021	30.10.2021	30.04.2022
30.06.2020	31.12.2020	30.06.2021	31.12.2021	30.06.2022
119	115	118	115	121

CONVOCATION

The fourth convocation of the Kerala University of Fisheries and Ocean Studies (KUFOS) was held on 19th February 2018 at 10.30 am at the Panangad main campus . Dr. Narendra Sing Rathore, Deputy Director General of Indian Council for Agriculture Research (ICAR) had inaugurated the convocation ceremony and delivered the key note address.

KUFOS Vice Chancellor Dr.A.Ramachandran conferred Degrees to 276 successful under graduate and post graduate students, who had completed their courses in 2016-2017 academic year in difference disciplines related to fisheries and ocean science. KUFOS Governing Council members Sri.E.T.Taison MLA, Adv.A.N.Shamseer MLA , and Senate Member Adv.M.Swaraj MLA delivered special addresses in the convocation. Dr.V.M. Victor George, Registrar of the University will propose a vote of thanks.

Awarding degrees in various subjects

Out of 276 degrees are awarded, 49 are Bachelor Degrees in Fisheries Science (B.F.Sc) . Though KUFOS was established only in 2010 trifurcating Kerala Agricultural University (KAU) , this is the 34th Batch of students (2013 admission) of Fisheries college, which was started in 1979 under KAU. All other degrees awarding in the convocation are Post Graduate Degrees which include 59 MBA, 114 MSc, 13 M.Tech, 29 M.Fsc, and 12 LLM (Maritime Law) .

Gold Medals to first Rank holders of various courses and two endowment awards will also be presented in the convocation.





Sl.No.	Name of the Course	Number of students
1	B.FSc.	50
2	M.FSc. (Fish Nutrition and Feed Technology)	2
3	M.FSc. (Aquatic Animal Health Management)	6
4	M.FSc. (Fisheries Resource Management)	4
5	M.FSc. (Aquatic Environment Management)	5
6	M.FSc. (Fish Processing Technology)	5
7	M.FSc. (Fisheries Engineering Technology)	3
8	M.FSc. (Aquaculture)	3
9	M.Sc.(Physical Oceanography and Ocean Modelling)	7
10	M.Sc., (Biological Oceanography and Biodiversity)	19
11	M.Sc. (Marine Chemistry)	10
12	M.Sc. (Food Science & Technology)	21
13	M.Sc. (Marine Microbiology and Marine Drugs)	18
14	M.Sc. (Biotechnology and Bioinformatics)	15
15	M.Sc. (Applied Geosciences)	6
16	M.Sc. (Disaster Management)	5
17	M.Sc. (Remote Sensing & GIS)	7
18	M.Tech. (Ocean and Coastal Safety Engineering)	2
19	M.Tech. (Coastal and Harbour Engineering)	8
20	M.Tech. (Fishery Engineering)	2
21	M.Tech. (Integrated Coastal Zone Management)	3
22	M.B.A.	54
23	M.B.A. (Energy Management)	3
24	M.Sc. (Statistics)	6
25	LL.M (Maritime Law)	12

GRAND TOTAL**276**

DIRECTORATE OF RESEARCH

Aquaculture is projected to be the prime source of seafood by 2030, as demand grows from the global middle class and wild capture fisheries approach their maximum exploitation. Fish farming can help provide livelihoods and feed a global population by responsible practices. However, for an aquaculture system to be truly sustainable, it must also satisfy the economic, environmental and social and community sustainability. Sustainable aquaculture is a dynamic concept and the sustainability of an aquaculture system will vary with species, location, societal norms and the state of knowledge and technology. Growth of aquaculture is absolutely necessary for meeting future demands for food. However, one of the biggest impacts of aquaculture is its environmental impacts. Some aquaculture practices that do not maintain standards and follow sustainable aquaculture practices, negatively impact the environment and also put pressure on wild fish growth by habitat modification and using wild caught fish as fish feed. Aquaculture has also contaminated wild fish habitats with pollution and diseases. Sustainable aquaculture is a real challenge. With the increased demand for seafood and wild caught fish being under constant threat, the world today needs sustainable aquaculture. It can be attained by adopting new technologies and reducing negative environmental impacts. They are Integrated Multi-Trophic Aquaculture (IMTA), and integration of aquaculture with other agriculture allied sectors.

The development of aquaculture is dependent on knowledge related to various disciplines, and fish nutrition is one of the important aspects among them. The multi-disciplinary nature of aquaculture is strongly expressed in the subject of requirement of quality feed and efficient feed management practices for a profitable venture. Aquaculture is a booming and promising animal protein producing industry for the growing population of the world. Feed is a vital farming input which greatly influences the sustainable aquaculture production. Feed shares the major production cost in aquaculture practice and growing competition for conventional feed ingredient ignite the necessity to search for wide spectrum raw materials, which can be effectively incorporated in the fish feed without any negative impact on the final yield and the environment.

Kerala University of Fisheries and Ocean Studies (KUFOS) has Field training facility comprising a total of 54 ponds with a water spread area around of 2 ha in the western campus drawing water from the Vembanad Lake. Ponds are demarcated as Freshwater ponds (FWP 1 to 10) and Brackish Water Ponds (BWP 1 to 44) based on the nature of influx water from Vembanad Lake. Usually, all the brackish water ponds are fresh water in nature during the months from June to October and chances with rise in salinity in the lake and can go up to 22-24 ppt during summer seasons. All the brackish water ponds (44) are tide-fed ponds through the feeder canals lead from the lake and freshwater ponds (10) are rain fed. In addition, there are 10 concrete cement ponds for nursery rearing.

Ten Research Centres are functioning in the School of Aquaculture and Biotechnology of KUFOS, in Plan Project mode, with funding from the 12th Five Year Plan. These Centres were engaged in focused research in all key areas of applied aquaculture over the past four years. The deliverables of these Centres were of much significance, from the research as well as from the farmers' point of view. Many of the technologies developed have been transferred to the farmers, and has been adopted well by them.

The Database developed and the expertise acquired in the varied areas of aquaculture through the above Research Centres, will serve as a solid foundation for more advanced research, aimed at addressing the real issues and ground realities, of the aquaculture sector. Establishment of a Centre of Excellence, for coordinating advanced and continued research, in all these areas, where work has been initiated and proceeded with, in the earlier Plan projects, is now the need of the hour. Considering the importance of sustainable aquaculture in the present scenario of aquaculture in Kerala, KUFOS is proposing a Centre of Excellence in Sustainable Aquaculture and Aquatic Animal Health Management, under the School of Aquaculture and Biotechnology with the following thrust areas:

THRUST AREAS

- To promote basic search to facilitate the aquaculture promoting R&D in breeding of commercially important edible and ornamental fishes
- Developing brood bank for sustainable production of fish employing selective breeding techniques

- Sustainable practices for culture of economically important Non-conventional species freshwater and brackishwater species
- Development of sustainable aquafeed from wide spectrum raw materials and propagation of feed based aquaculture in Kerala
- Bio prospecting of microbes from various aquatic environments for potential application in aquaculture
- Integrated system for multi-disciplinary aquatic animal health research and management

Professor Chair:

Dr.T.V.Sankar

Director of Research, KUFOS

(in Charge)**Faculties associated:**

Dr.Shyama. S

Dr. Devika Pillai

Dr. Rejish KumaR . V J

Dr. Chiranjiv Pradhan

Dr. Binu Varghese

Dr. Linoy Libiny

1. Centre of Excellence in Sustainable Aquaculture and Aquatic Animal Health Management

The centre has taken up projects in are of breeding and promoting

- indigenous culturable fish species – breeding /RAS system
- Developing low cost feed using locally available ingredients.
- Addressthe health issues of aquatic animals
- Propagating the culture practices for the overall development of fisheries

Project and Principal Investigators

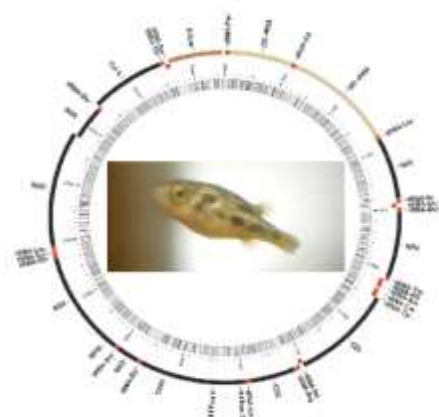
S.No	Project	Project Leader
1.	Development and standardisation of farmer friendly, cost effective techniques for production of live feeds for aquaculture / Establishment of a fish and shrimp seed bank	Dr.Shyama. S
2.	Integrated system for aquatic animal health research and management.	Dr. Devika Pillai
3.	Biotechnological interventions in aquaculture for sustainable production.	Dr. Rejish KumaR . V J
4.	Development of sustainable aqua feed from wide spectrum raw materials and propagation of feed based aquaculture in Kerala.	Dr. Chiranjiv Pradhan
5.	Developing brood bank for sustainable production of Karimeen, <i>Etroplus suratensis</i> (Bloch, 1790) and an initiation of selective breeding program	Dr. Binu Varghese
6.	Intensive culture practices for economically important species	Dr. Linoy Libiny

Research achievements

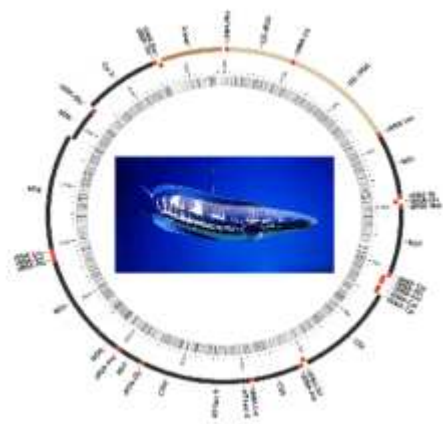
Whole mitochondrial DNA sequence analysis of endemic fishes of kerala:

Fish exhibit amazing diversity in terms of size, shape colour besides many other morphological characteristics and the scientific identification of fish species is not restricted to taxonomists and systematics alone but is also concerned with fishery ecology, fishery management, estimations of recruitment and spawn areas, and authentication of food products. Conventional methods of fish identification often poses problem to scientists because of high diversity and morphological flexibility. Also many times it is difficult to identify them in their diverse developmental stages by using morphological characteristics alone. The DNA-based identification techniques, of late, prove to be effective analytical techniques and DNA barcoding has been largely advocated for identification of biological diversity. KUFOS has been using DNA technique to identify selected farmed species and is continued over the years.

- The mitochondrial genome has many properties that make it useful for reconstructing recent phylogenetic history. The sequencing of whole mitochondrial genome of fishes, which are endemic to kerala, viz., *Channa diplogramma*, *Clarias dussumieri*, *Horabagrus nigricollaris*, *Carinotetraodon travancoricus* and *Tor malabaricus* has been completed.



Complete mitogenome of malabar puffer fish
Carinotetraodon travancoricus



Complete mitogenome of malabar snakehead
Channa diplogramma



- Isolated yeasts from the gut of Tilapia, Etroplus and Seabass for assessing the potential as probiotic in aquaculture

Development of feed from local ingredients

Aquaculture requires optimization of nutrition to efficiently raise fish for the purpose of food production. Fish nutrition is the study of nutrients and energy sources essential for fish health, growth and reproduction. Sustainability of the aquaculture industry is an environmental, economic and social concern and certain issues related to fish nutrition namely feed and nutrient efficiency, overfeeding and waste, unsustainable feed ingredients, fish health issues, biotechnology and human health concerns have become environmental concern and achieving a balance between efficient and safe food production with environmental sustainability has become a challenge for the industry. It is also clear that more 50% of the cost of production goes towards good feed and is an important problem to be addressed. KUFOS has initiated research in identifying eco-friendly and effective raw materials as replacements for conventional raw materials and some of the initiatives are identified.

Three feeding experiments were initiated to study the effect of natural components on growth of fish viz., Cashew nut processing waste, Dietary Taurine etc. on th performance, nutrient utilization and health status of aquacultured fishes.



A state of art wet laboratory for nutrient digestibility study with re-circulatory facility is ready for feeding experiments

Captive breeding for Etroplus / Recirculatory Aquaculture system

Re-circulatory Aquaculture system (RAS) is recognised as a high-producing and low-risk culture practise to achieve sustainable development of aquaculture. Compared to traditional aquaculture system this has been identified as safe, healthy and cost effective besides being environment friendly.

KUFOS has developed successfully a novel captive breeding setup for Etroplus and successfully bred Karimeen inside the hatchery in FRP tank. Broodstock development and pairing achieved **under** captivity. A Livefeed cultures established for Karimeen. The recirculation systems for brooders and larvae are getting installed.



RAS system for Etroplus



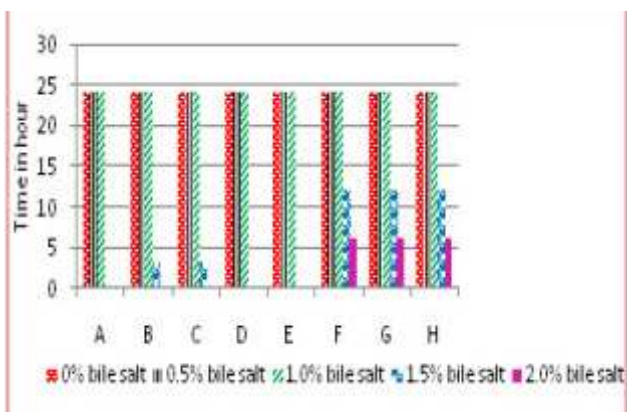
Etroplus captive breeding

- Meat quality and nutritional profile of pearlspot from different salinity conditions revealed variation in the composition. The amino acid and fatty acid profile of the samples are being done for getting a comprehensive understand on fish quality.

Quorum quenching bacteria as probiotic

The process by which microorganisms monitor and regulate their population density through chemical signaling is termed quorum sensing and the process by which quorum sensing can be inhibited is called quorum quenching. Work over the past few years has confirmed that quorum-quenching mechanisms are widely preserved in many prokaryotic and eukaryotic organisms. These naturally occurring quorum-quenching mechanisms appear to play important roles in microbe-microbe and pathogen-host interactions.

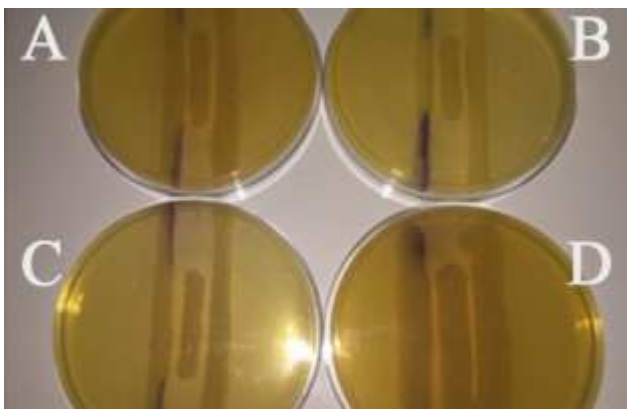
Diseases constitute one of the most important economic constraints for the development of aquaculture sector. The potential probiotic traits of bacteria as a suitable biocontrol agent in aquaculture were tried. Different strains of QQ bacteria were isolated from gastrointestinal tract of *Oreochromis niloticus* and soil from fish culture pond and about few showed strong quorum quenching ability. The quorum quenching ability of these isolates was confirmed by the presence of *aiiA* [Autoinducer inactivation] homologue gene. The bacteria were screened by in vivo experiments for their probiotic activity.



Bile-salt tolerance (0-2%) of isolated strains at different time periods of incubation at 37°C.



In vivo study with probiotic diet



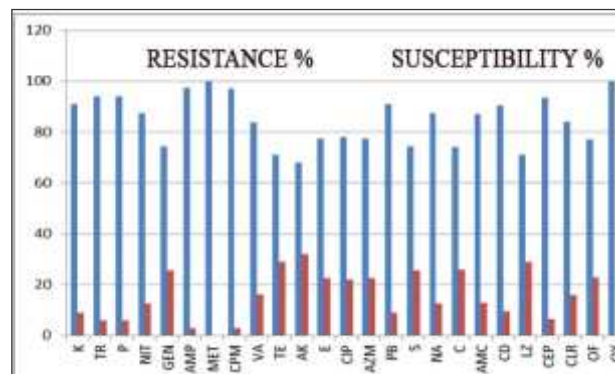
AHL degradation assay on LB agar. In each plate, CV31532 (AHL producing positive strain) (right), QQ bacteria (AHL degrading strain)(middle) and CV026 (Bio indicator strain)(left).The area near QQ bacteria (Middle line) of CV026 has no purple pigment indicating the ability of the isolates to degrade AHL molecules. A. *Bacillus thuringiensis*, B. *Enterococcus faecium* C.*Lactobacillus plantarum*, D. *Lactobacillus casei*

Surveillance of Antimicrobial Resistance in selected aquaculture farms

Antimicrobial resistance is a major global public health concern and considered as a serious food safety issue. Antimicrobial agents play a most relevant role in the therapy of bacterial infections in humans, veterinary and aquaculture. The indiscriminate use of antimicrobial agents is one of the major reasons in the development and spread of antimicrobial resistance.

Samples included water, soil, clam, fish, shrimps and crabs from direct discharge from the hospital to public water bodies and places using the same water for aquaculture. All the bacterial isolates were characterized by biochemical methods and a total of 214 isolates were collected from different samples. Most of the isolates belonged to Gram negative *Enterobacteriaceae* family.

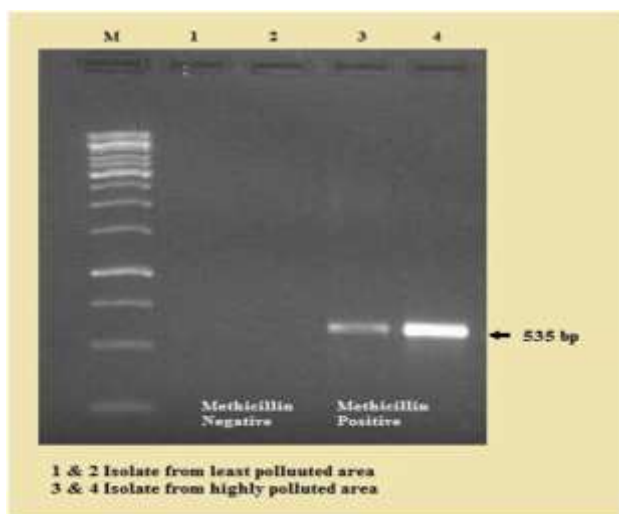
Multiple Antibiotic Resistance (MAR) and Antibiotic resistance Index (ARI) of these isolates were very high. The study indicated that mechanism of transfer of antimicrobial resistance is mainly plasmid mediated.



Antibiotic resistance percentage among bacterial isolates from direct hospital discharge



Antibiotic resistance percentage among bacterial isolates from aquaculture farms located in the vicinity of hospitals



Presence of methicillin resistance gene in isolates Arrow points to the methicillin resistance gene (535 bp)

Establishment of fish and prawn seed bank

In order to address the issue of ready and timely availability of research effort has been made on the formulation and evaluation of broodstock diets and improving larval survival of seed fish. While accomplishing the objectives seed production of seven types of ornamental fishes was carried out viz., guppy (seven varieties), molly (two varieties), platy (two varieties) sword tail, Siamese fighter fish and gold fish. The quality brood stock is being raised for sword tail, platy, guppy and Siamese fighter.

Similarly brood stock diets are being formulated incorporating processing waste /sprouted grains / indigenous carotenoid sources. A range of locally available, indigenous sources of carotenoids were screened and incorporated in diets for assessing their potential in enhancing the colouration of ornamental fish.



Seed production from gold fish, fighters and Aquarium vertical setup for seed production

Development and standardization of farmer friendly cost effective techniques for production of live feeds for aquaculture

The production of phytoplankton and zooplankton is essential in various industrial activities including aquaculture and aquaculture depends on planktons as a natural food source for the larval stages of many aquacultured species. The use of live feed in larval rearing therefore remains a necessity in most aquatic organism hatcheries. In fact, most early stages of fish larvae do not react to dry feeds and require live feeds that swim actively and stimulate their raptorial behaviour. This is also due to the inability of the fish larvae to digest and assimilate the formulated dry feed. Work has been initiated to determine the culture requirements of different live feeds and preliminary studies, to evaluate different media / substrates for the culture of live feeds and to produce live feeds on mass scale. The live feed organisms taken up for study include moina, microworm, grindal worm, copepods and infusoria. Different low cost and effective culture media and substrates have been assessed for their potential to support biomass production based on the outcome in the above studies, mass culture trials are in progress,



Mass culture of Moina in circular tubs, Paramecium culture using milk and plant materials

DIRECTORATE OF EXTENSION

Directorate of extension established under the Kerala University of Fisheries and Ocean Studies (KUFOS) promotes the development of fisheries sector by way of providing necessary information, imparting training and other extension support continuously to the fisher folk and fish farmers. In addition to the dissemination of innovations in the field of aquaculture and allied fields it also helps to identify the problems of the farmers and offer solutions at the right time. The field level trainings, demonstrations and awareness camps organizing at various centers will help the farmers to increase their level of knowledge, developing skill and changing their attitude which in turn contributes improvement in their quality of life. The Directorate of extension has projects and programmes aimed at empowerment of women through income generating activities by way of providing self employment and motivating them in taking up gainful employment, thus ensuring gender equality in all aspects of life. In addition to these, the scientists working in the various departments of the Faculty of Fisheries acts as resource persons for various training programmes organized by State and Central Govt. institutions, NGOs etc., providing Radio talks, publishing popular articles as part of the transfer of technology process.

Fishing industry plays a significant role in the total economy of Kerala. The State is endowed with vast resources of fresh and brackish waters. It has a total estimated freshwater area of about 3,32,000ha consisting of rivers, tanks, ponds, paddy fields, reservoirs etc. There is an estimated 1.26 lakh ha area of brackish water resources consisting of 0.65 lakh ha of brackish waters, 0.46 lakh ha of backwaters and canals, 0.13 lakh ha. of prawn filtration fields in the State. Out of these, more than 77% of the brackish water areas are left unused. A unique feature of the State is the occurrence of 53 interconnected backwaters (Kayals) and 44 rivers. (Department of Fisheries, Govt. of Kerala). There is immense scope for promoting various aquaculture activities in these waterbodies which would help to increase the fish production of the State, strengthening the food security and providing gainful employment to the fisherfolk leading improvement in their quality of life.

Inland fish production from the State of Kerala provides significant contribution to animal protein supplies to the people. The total population of fisherfolk, who depend for their livelihood on the inland waters of the State comes around 2.30 lakh, which accounts 0.69% of the State's total population. The active fishermen of the inland sector were estimated at 0.52 lakh.

In spite of the various resources, the States' position in the total inland fish production of the country is not encouraging or appreciable. Most of the fish production from this sector is marketed domestically and consumed locally. The State occupies 11th position in the inland fish production of the country which constitutes about 2.4 % of the total inland fish production (Kerala Inland Fisheries Statistics-2013, Department of Fisheries, Govt of Kerala). The total fish production of the State during the year 2015-16 is 7.27 (lakh tones) which is insufficient to meet the ever-increasing requirement of the people. (Directorate of Fisheries, Government of Kerala). National average annual consumption of fish and fish products in the year 2010 was 2.85 kg per capita in the costal State of Kerala, the fish is consumed the most with, 22.7kg per capita (De Jong, Jelte., 2017). The State depends on the neighboring States to meet its daily requirements of fish. In the present scenario there is an urgent need to increase the fish production of the State and immediate steps should be taken for the maximum utilization of the resources by bringing all the available water bodies under cultivation. This could be achieved by transferring diversified aquaculture practices to the fisherfolk in an eco-friendly and sustainable manner by way of conducting training cum demonstration programmes, motivating them in adopting the technology and providing technical and financial support to them. The more or less stagnant position of the marine fish production of the state during the past years also calls for paying more attention for the effective utilization of the inland fishery resources so as to increase fish production.

During the early nineties the growth in aquaculture production has been driven by shrimp farming. Along with these there was tremendous development of ancillary and allied industries like hatcheries and manufacturing companies, processing companies, ice plants etc. But the intensive cultural practices with increased levels of inputs collapsed the shrimp farming industry and caused huge losses to the farmers. Infection of disease the most severe one among the various constraints which happened during those years is not yet controllable though so many efforts are taking place in this direction. One

of the alternative solution to overcome this crisis is to promote diversified aquaculture practices in a sustainable and eco-friendly manner along the coastal areas which would help in augmenting the fish production and save the fisherfolk who depend upon the shrimp farming. Cage aquaculture and pen culture, quiet recently introduced innovations, occupies a predominant place in the diversification of aquaculture and play a pivotal role in maximizing the fish production from unit area. It has gained momentum in several countries and in the state of Kerala as well. As such some steps are being taken by the Govt of Kerala to promote these technologies in suitable water bodies. Kerala University of Fisheries and Ocean studies (KUFOS) as part of the plan project "Village Adoption for Empowerment and Capacity Building Ensuring Livelihood of Fisherfolk in Central Kerala" some efforts are being taken in this direction with the objective of augmenting inland fish production, creating more employment opportunities and empowering the fisherfolk including women by providing gainful employment to them.

Project Outline

Name of the project	-	Village Adoption for Empowerment and Capacity Building Ensuring Livelihood of Fisherfolk in Central Kerala
Location of the project	-	Kerala State
Implementing agency	-	Kerala University of Fisheries and Ocean Studies,(KUFOS) Panangad, Kochi,Kerala-682506
Project outlay	-	Rs.20,00,000/-
Activities	-	Pen culture
	-	Cage Culture
	-	Freshwater Fish Farming
	-	Fish Processing Technology
Beneficiaries		Individual farmers/Farmer groups/SHG
Principal Investigator		Dr.Daisy.C.Kappen, Director of Extension i/c
Project staff		Smt. Divya ND, Research Fellow
		Sri.Renjith R, Field Assistant

Aquaculture production (foodfish) today in India, the 2nd largest is competing with the other developing nations. Though we stand ahead with the title, statistics show ourselves (with 10% of overall Production) far below China (60% of overall production). Kerala being the 4th largest producer of fish (710 metric tonnes) in India, our potential resources such as vast inland and estuarine waters are seriously underutilized. Sustainable production of fish from inland waterbodies at intensive level requires transfer of knowledge and subsequent adoption of the technology by the farmers.

The implementation of the project, Village adoption will be carried out in suitable areas ideal for promoting aquaculture and allied enterprises. The Village/panchayath/municipality/corporation will be selected based on the following criteria,

1. Good water quality/pollution free conditions for promoting aquaculture practices
2. Genuine farmer interest in individual or groups such as Kudumbasree units, etc.
3. Easy access to the site from KUFOS

Looking at the above criteria two ideal locations, Thripunithura Municipality and Thuravoor Panchayath are identified for implementing the scheme.

1. Thripunithura Municipality

Thripunithura is surrounded by stretches of *Vembanad Lake* and Canals which sustain inland navigation. The town is situated almost 8 metres above Mean Sea Level. As 2001 India census, Thripunithura had a population of 59,881 with an average literacy rate of 87%, higher than the national average of 71.5%. Blessed with such vast inland pollution - free resources, such as ponds, lakes, quarry, etc. sustainable farming techniques can be transferred to the selected farmers.

2. Thuravoor Panchayat

Thuravoor Panchayat is situated in the Pattanakkad Block of Cherthala Taluk in Alappuzha District. It has vast backwaters, paddy fields, ponds etc. ensuring better prospects for promoting diversified aquaculture activities. Huge mechanized shutters installed along the Arabian Sea regulate the flow of seawater into the areas. Estuarine species such as Asian Seabass, Etroplus, shrimp, freshwater prawn, etc. can be performed.

The project proposal is presented both in Thripunithura Municipality council meeting, and in Thuravoor Panchayat and their consent has been obtained in implementing the scheme. All the activities of the project viz. selection of the beneficiaries, conducting training programmes distribution of inputs etc will be carried out with the cooperation and participation of these local bodies. In addition to these, assistance will also be provided to the farmers belonging to other Panchayat, Municipalities etc. showing keen interest in various aquaculture technologies and areas having high potential for promoting fish culture will also be selected for conducting frontline demonstrations. This will help to motivate other farmers and to disseminate the technology to further areas which, in turn, helps to increase the fish production of the State.

Objectives

1. To survey the fishery resource potential and generation of data base;
2. To analyze the water quality of the selected area;
3. To conduct training programmes on various aquaculture practices and fish processing;
4. To introduce freshwater fish farming, brackish water fish farming, cage culture, pen culture, ornamental fish culture etc. in suitable water bodies;
5. To study the replicability and scope for up-scaling of the project components.

Programme details

A few frontline demonstrations on diversified aquaculture practices will be conducted at selected areas and critical inputs such as seed, feed, culturing material, etc. will be delivered to the demonstrating farmer/groups. The entire activities right from the preparation of the field to the final harvesting will be done by the farmers/ groups under the close supervision of the KUFOS. After conducting the demonstration programme, to disseminate the technology to further areas at a subsidized rate of 50% of the overall input cost (both recurring and non-recurring) will be given to the interested farmers/groups coming forward to adopt the technology. Periodic monitoring and evaluation will be done by KUFOS to ensure the successful implementation of the programme. If necessary further enhanced training programs will be given to the selected farmers/groups to ensure quality sustainable fish production.

Budget

Sl.No.	Items	Amount (Rs)
1.	Salary for the SRF and Field Asst, 1.SRF @ 13,000/month & FiedAsst @ RS.8,500/month for 1 year	2,58,000
2.	TA for the project staff	50,000
3.	Conducting Resource Survey	1,00,000
4.	Selecting beneficiary farmers, project presentation & orientation training etc.	1,00,000
5.	Conducting frontline demonstration, distribution of inputs to farmers etc.	12,37,000
6.	Training, workshop, field visit etc.	1,50,000
7.	Periodic monitoring, evaluation& Harvesting etc	25,000
8.	Fuel charge	50,000
9.	Miscellaneous	30,000
	Total	20,00,000

Village Adoption- Guidelines

1. Two villages having sufficient waterbodies to promote diversified aquaculture practices will be adopted in each phase

2. KUFOS will conduct a few frontline demonstrations on diversified aquaculture practices in different locations of the selected villages depending upon the availability of waterbodies and considering the factors viz. density of the fisherfolk residing in that area, suitability of the waterbodies etc. The objective is to motivate and convince the farmers about the utility and feasibility of the technology and to disseminate the technology to further areas.

3. Since success of the demonstration is a crucial factor for further dissemination of the practice among the fisherfolk, a well - experienced Demonstrator (Farmer) will be selected so as to ensure its success and the University will provide all inputs required for conducting the demonstration for the farmers

4. The farmer/beneficiary groups interested in the technology and coming forward to adopt it will be given subsidy at the rate of 50% of the total cost (both recurring and non recurring excluding the seeds) subject to a maximum of Rs.25,000/-

5. Fish seeds @ 40nos/cent and shrimp seeds @ 20,000/acre will be distributed free of cost to all farmers/beneficiary groups having sufficient resources suitable for promoting aquaculture activities subject to a maximum of Rs.5,000/- and 25,000/- respectively. The project staff will inspect the site for verifying its suitability. For promoting cage aquaculture, seeds of cultivable fishes like seabass, pearlspot etc will be distributed to the farmer @ 75nos/m³ subject to a maximum value of Rs.10,000/-. For pen culture the amount is limited to Rs.5,000/-

6. In addition to the selected villages, areas having high potential for promoting diversified aquaculture

activities will also be selected for conducting frontline demonstration

7. Assistance (50% of the total input cost) will also be given for starting small scale enterprises in the allied fields viz. production of value-added fishery products, fish feed etc. subject to a maximum of Rs.10,000/- per unit.

8. Special emphasis will be given in organizing women SHGs and empowering them by providing gainful employment in aquaculture and allied activities. Subsidy upto 75% will be given to women beneficiary groups and SC/ST groups

9. The University will provide all inputs necessary for promoting aquaculture activities in Public ponds.

10. KUFOS will directly implement the entire activities with the cooperation and participation of the Panchayath/Municipalities/Corporations.

The first Extension Education Council meeting held on 11/7/2017 at KUFOS, Panangad decided to adopt Andhakaranazhi region in Pattanakkad Panchayath of the Alleppy District as it is a Tsunami affected area.

ACTIVITIES OF THE PROJECT

i. Pen culture

Culture of fishes in enclosures is an age old practice in several countries. It has already been recognized as an important means for increasing the fish production from unit area and contribute towards additional utilization of the backwaters. It is important in the State like Kerala where 77% of the backwaters is left unused. The various brackish water fishes like Pearls spot (Karimeen), Red snapper (Chembally), Trevally (Vatta), Cobia (Motha), Silver Pompano (Valavody) etc. can be successfully cultured in the pens constructed along the backwaters of Kerala. These fishes have great market demand and farmers can carry out the culture profitably without much capital investment. Though the availability of the seeds of the above fishes acts as a major constraint, the production can be increased through Capture Based Aquaculture system (CBA). It is a practice throughout the world using a variety of marine and freshwater species in which seeds are collected from the wild, stocking them in captivity and growing to marketable size. It serves as an alternative means to enhance the yield, to meet market demand and to provide livelihood security to the poor fisherfolk. The small-sized seeds of the above fishes which are caught in the various inland fishing gears operating along coastal belt of Kerala, such as Chinese dip net, stake net, pole and lines etc. can be collected and reared to marketable size by stocking them in the pens constructed in the backwaters for a period of 8-10 months. As the seeds are collected from these gears and fed with the small uneconomic fishes which are available as bycatch in the same gears and discarded while fishing, the cost of these two inputs can be reduced to a great extent. It also ensures better survival rates as the fishes are stocked in the pens with the same water quality from where they are collected.

In addition to the Tripunithura Municipality and Thuravoor Grama Panchayath, the first Extension Education Council meeting held on 11/7/2017 at KUFOS, Panangad decided to adopt Kumbalam village also so as to make it a role model - one by promoting family farming. A discussion was organized with the Panchayath President and questionnaires were distributed to the farmers through ward members for collecting the details about resources available for promoting various aquaculture activities in this village. Based upon this, a survey was conducted in the wards IX and X of the this village and three sites were identified as suitable for establishing demonstration units in Pen culture viz. 1) Pearls spot (Karimeen) 2) Giant trevally (Vatta) and Pearls spot and 3) Pearls spot and Silver Pompano (Valavody). Beneficiary groups were formed in these sites and all the inputs required for promoting pen culture viz. netting material, seed, feed etc. were distributed to them and stocked with a total number of 2,000 numbers of pearlspot seeds on 28/6/2017. Partial harvesting of the stocked fishes were carried out on 23/12/2017 and the stocked fishes (pearls spot) have shown an average weight of 240 gm in a period of six months.

Distribution of inputs to farmers at Kumbalam Panchayath on 25/6/2017



Pen culture Units established at Kumbalam



Stocking the pen culture units with pearlspot seeds at Kumbalam by the honorable Vice Chancellor, KUFOS on 28/6/2017



Partial harvesting at Kumbalam on 23/12/2017

ii.Cage Aquaculture

Cage Aquaculture, the practice of growing cultivable fishes in an enclosed net cage in suitable waterbodies is a relatively recent aquaculture innovation. It has grown very rapidly during the past 20 years and undergoing rapid changes due to growing demand for aquaculture products both from the developing and developed countries. It is an aquaculture production system which consists of a floating frame, enclosed net cage and a mooring system in which the different types of cultivable fishes are kept in appropriate stocking densities and cultured for a particular period. Low investment, high returns, simplified cultural practices and harvesting and resource flexibility make it more attractive compared to other aquaculture practices. Labour cost involved in various activities especially in harvesting the fishes is practically nil as the farmer himself can manage the entire activities and harvest the stocked fishes. Moreover the harvesting of the stocked fishes can be coincided with festive occasions so as to fetch maximum price. It is ideal for poor and landless fisherfolk and is becoming popular in the State of Kerala where both fresh and brackish water resources suitable for promoting cage aquaculture are available. Realizing its scope in the back waters of our State, KUFOS has started 53 units consisting of 162 beneficiary farmers at Thurithipuram, Kottuvally, Kuzhuppilly, Anapuzha, Chendamangalam, Manjali, Ayyampilly, Cheriappilly, Gothuruth, Mulavukadu, Poyya, Cheruveypu, Methala etc. during the year 2017-18. University is continuously monitoring the activities of these groups and all these units are functioning well. The harvesting of the stocked fishes can be done after a period of culture of 8-10 months. To know the prospects cage culture of Silver pompano (Valvodi) and to develop a package of practices for the farmers, 500 numbers of pompano seeds were purchased from Rajiv Gandhi Center for Aquaculture (RGCA), Kollamkode, Trivandrum on 20/1/2018 and introduced in the cages. The stocked fishes shows better growth rate and the results are encouraging. The successful conduct of this innovation will help to standardize the technology of cage culture of silver pompano and can be transferred to fish farmers.

Harvesting of Red snapper at Thiruthipuram on 8/12/2017



Harvesting of seabass at Kottuvally on 23/12/2017



Harvesting of sea bass at Thuruthippuram on 23/3/2018



Cage Culture Units established



iii. Freshwater Fish Farming

a. Kizhakkambalam Grama Panchayath

The president of the Kizhakkambalam Gramam Panchayath in his letter dt.4/10/2017 informed that the Panchayath has decided to stock all the available ponds which are suitable for promoting aquaculture activities with seeds of cultivable freshwater fishes and requested KUFOS to provide all technical and financial support for the same. A meeting was organized at the Panchayath on 4/10/2017 to discuss the matter. In all 60 farmers belonging to this Panchayath have already been trained by KUFOS on 31st May and 1st June-2017. Based upon the list of farmers submitted by the Panchayath KUFOS team conducted a survey and site inspection so as to identify the ponds suitable for stocking. An ideal pond of size 50 cent ready to stock the fish seeds has been located in ward VI at Chelakkulam and decided to make it as a demonstration pond so as to convince the farmers about the utility of fish farming and motivate them in adopting freshwater farming. It has been stocked with 2,000 nos. of carp seeds

Survey and site inspection at Kizhakkambalam Panchayath on 4/10/2017



b. Piravom Municipality

Co ordinator of the Piravom Municipality submitted the list farmers having ponds which are suitable for stocking the fish seeds. The project staff conducted a survey and site inspection on 25/9/2017 and 27/9/2017 and selected the ponds suitable for stocking the fish seeds. A total area of about 2.12 acres has been identified as suitable for stocking the carp seeds. 8480 nos of seeds were distributed to 19 numbers of beneficiary farmers. During the survey a quarry of size 1acre owned by two farmers has been identified. It is has already been stocked with pearlspot seeds purchased from the earstwhile College of Fisheries years back. Continuous breeding of the stocked fishes from the year 2005 onwards resulted availability of plenty of pearlspot seeds. Collecting these seeds, stocking them in the cages and distributing to other farmers in these area will be a remedy to overcome the scarcity of the pearlspot seeds. Two cages of size 2mx2mx1.5m were distributed to the owners of the quarry.

Distribution of inputs to farmers at Piravom Municipality



c. Tripunithura Municipality

Among the brackish water cultivable fishes, the peralspot, *Etroplus suratensis* (Karimeen) known as the signature fish of Kerala is one of the most ideal species for brackish water fish farming. It is a hardy fish having good flavor and taste and can be cultured in ponds and cages profitably without much capital investment. But the scarcity of seeds acts as a major constraint in extending the technology to further areas. It is known that seeds of this fish are available in the prawn filtration fields of this Municipality during the month of March -April. Hence, a survey was conducted in this region and a rearing unit was established at Thekkumbhagam, Tripunithura North by fixing two cages of size 2m x2mx 1.5m in the prawn filtration field owned by Sri.V.K.Satyan for collecting the seeds and stocking it for further use. In addition to these, 500 numbers of pearlspot seeds and 160 numbers of carp seeds were also distributed to the farmers on 1/12/2017 and 12/10/2017 respectively.

Rearing Unit Started at Thekkumbhagam, Tripunithura

Rearing Unit Started at Thekkumbhagam, Tripunithura



Women empowerment-Distribution of pearlspot seeds Mrs.Beena Sunil



iv. Fish Processing

The first Extension Education Council meeting held on 11/7/2017 decided to include Andhakarnazhi region in Pattanakkad Panchayath of the Alappuza district in the Village Adoption programme as it is a Tsunami affected area. This area plays a major role in the marine capture fisheries in the State of Kerala. The coastal area was hard hit by Tsunami on 26th December 2004, causing loss of property worth rupees lakhs and many a precious life Fisherfolk in this area are struggling hard to earn a living. As part of the project, a survey was conducted in these areas and found that poverty and unemployment are the most important problems of the fisherfolk especially the womenfolk. A large number of fisherwomen in the coastal area are engaged in fish drying. They are unorganized. Fish drying is carried out individually at the backyards of their houses. The unhygienic conditions there, lead to poor quality of products of their fetching low price in the market leading to low per capita income. Organizing these fisherfolk with a view to empowering them by providing gainful employment will definitely help to increase their socio economic status and quality of life. To achieve this objective, adequate infrastructural and marketing facilities for fish drying have to be provided. To discuss the matter a meeting of the womenfolk engaged in fish drying was organized on August 8th 2017. In all seventy womenfolk participated in the meeting and they expressed their felt need of starting up of fish drying units. Hence, it was decided to establish four demonstration units at Vettakkal, Ottmassery, West Manakkodam and Azheekkal by organizing four beneficiary groups. Another meeting was also organized on 27/9/2017 to discuss the items required for starting up of small units with limited investment. After organizing these groups the project team visited the proposed area for starting up the demonstration units. These areas, including the building there are sufficient for carrying out the activities like cleaning, salting etc. Only some equipment viz. weighing machine, sealing machine, netting material etc. need to be provided. It is identified that for establishing four demonstration units in four distant places a total amount of Rs. 50,000/- is required which will provide employment to 46 poor womenfolk in that village. The items required for starting up the units were purchased and an inaugural function was organized on 5/10/2017. Dr. M.S Raju, Dean i/c, KUFOS, distributed the items to the

Discussion with the women beneficiaries on 8th August 2017



Women Empowerment-Distribution of inputs to beneficiaries at Andhakaranazhi on 5/10/2017



Establishment of Fish drying units at Andhakaranazhi - Executing MOU with CIFT on 23/10/2017



Demonstration Units established



Demonstration Units established



Drying the fish



Products prepared



beneficiaries. For drying the fish during the rainy season an artificial dryer is required. These fisherfolk were already trained by CIFT, CIFT expressed the willingness to issue the drying unit free of cost to beneficiary groups which will act as a common facility for all these four groups for drying the fishes during rainy season. Hence, an artificial dryer was installed on 23/10/2017 and a one - day training programme on hygienic handling and fish drying was also organized on that day.

1. Training Programme on “Fresh water Fish Farming”

Imparting training to the farmers with the objective of increasing the level of knowledge and developing their skill etc. are effective methods in the transfer of technology. To make the farmers aware of the various techniques in freshwater fish farming and to equip them with the recent techniques in aquaculture a two day training programme was organized in the seminar hall at KUFOS Headquarters on 31st and 1st June 2017. Director of Extension welcomed the gathering. The programme was inaugurated

by Prof.(Dr.)A Ramachandran, the honourable Vice Chancellor of KUFOS and it was presided over by Sri.K.V.Jacob the president of Kizhakkambalam Grama Panchayath. Dr.V.M Victor George, the Registrar and Dr.T.V.Sankar, Director of Research, offered felicitations. Scientists of KUFOS engaged classes to the farmers on various topics viz. Fresh water fish farming, Ornamental Fish culture, Fish diseases and remedial measures, Fisheries Department and its activities, Aquaponics, culture of GIFT Tilapia and preparation of artificial feed. One hundred and twenty one farmers attended the training programme.

The honourable Vice Chancellor of KUFOS Dr.(Prof.) A.Ramachandran inaugurating the two- day training programme on “Freshwater Fish Farming”



2.Fish Farmers Day- Training Programme on “Diversification of Aquaculture-Prospects and problems”

It was in 2001 that the Government of India declared July 10 as Fish Farmers Day to honour scientist Hiralal Choudhary, and Dr.K.H.Alikunji who had successfully conducted induced breeding in Indian major carp fish during the year 1957. KUFOS celebrated “Fish Farmers Day” on 10/7/2017 and a three - days training programme on “Diversification of Aquaculture-Prospects and Problems” was organized from 10/7/2017 to 12/7/2017 at KUFOS Headquarters. The programme was inaugurated by the honorable Vice Chancellor of KUFOS Prof.(Dr.)A.Ramachandran and Dr K.K.Vijayan, Director, Central Institute of Brackish water Aquaculture (CIBA) delivered the keynote address..Dr.,K.Padmakumar, Pro-Vice chancellor, Dr.V.M. Victor George, Registrar, Dr.T.V.Sankar, Director of Research, Dr.K.Gopakumar, Professor of Eminence and Dr.M.S.Raju, Dean offered felicitations on this occasion. Scientists of KUFOS engaged classes to the farmers on the topics viz. freshwater fish farming, vannamei shrimp culture, fish diseases, Culture of GIFT Tilapia, Live feed culture, preparation of artificial feed, culture and breeding of indigenous fishes, activities of Department of Fisheries, Pen culture/ Cage culture, Aquaponics and preparation of value-added fishery products. Sixty two farmers attended the training programme.

Prof. (Dr.)A Ramachandran, the honourable Vice Chancellor, KUFOS inaugurating the training programme on “Diversification of Aquaculture-Prospects and problems”



Honouring Kalathiparambil Poovan, Chathamma, who has been in fish farming for the last 60 years



3. Training cum demonstration programme on “Hygienic handling and fish drying”

The University established four demonstration units at Andhakaranazhi region of Pattanakkad Panchayath in Alappuzha District for providing employment to the womenfolk residing in that area. To make them aware of the women fisherfolk about the importance of hygienic handling of fish and to equip them in the preparation of quality dried fishery products by ensuring the quality both for domestic and export market a one - day training programme was organized at Andhakaranazhi region in the Pattanakkad Panchayath of Alappuzha District on 23rd October 2017. The programme was arranged as part of the installation of an artificial dryer issued by CIFT. In all 35 participants from nearby areas attended the programme. Dr. Rehana Raj and Dr. Annies Rani Delfiya engaged classes and demonstrated the preparation of quality products under hygienic conditions.



4. Training programme on “Recent Advances in Aquaculture”

Directorate of extension conducted a four-days training programme on “Recent Advances in Aquaculture” from 7th to 10th November 2017 for fish farmers at KUFOS Headquarters. Eighty five farmers participated in this training programme. The honorable Vice Chancellor Prof (Dr.) A Ramachandran inaugurated the training programme. Topics covered in this training programmes were indigenous fishes and its breeding techniques, culture of GIFT tilapia, Vannamei culture, Freshwater aquaculture, Aquaponics, Live feed culture, Fish and its nutritional value, brackish water aquaculture/ shrimp culture, activities of the Department of Fisheries, preparation of fish feed, cage culture/ pen culture, Fish diseases and their management. One day field visit to the demonstration units established at Thiruthipuram, Puthenvelikkara was also organized.

Skill development-Preparation of artificial feed



Dr. V M Victor George , Registrar, KUFOS
Distributing certificates to the participants



Field Visitto the Cage culture and pen culture units and established at Thiruthipuram on 10/11/2017



5. Training programme on “Cage Aquaculture and Pen culture”

Training programme at Payyanur on 19/12/2017



6. Training Programme on “Cage Aquaculture and Pen culture” President of the Kerala Aqua Farmer's Federation, Payyanur, Mr.T.Purushothaman in his letter dt.21/2/2018 informed that the farmers including the SHG's were doing Mussel farming in the back waters of Kannur and Kasaragod Districts. Mass mortality of the cultured mussels during the last few years caused huge loss to the farmers. To overcome this crisis and to save the fisherfolk, crop rotation is required. The extensive back - waters available in these Districts can effectively be utilized for promoting cage aquaculture and pen culture. He reported that the farmers are interested and coming forward to take up these activities and requested KUFOS to provide both technical and financial support in this regard. Hence, two training programmes on “Cage and Pen culture” were organized at Payyanur and Cheruvathur on 19/12/2017 and 20/12/2017 respectively. Altogether 115 farmers attended the programme.

Training programme at Cheruvathoor 20/12/2017

Activities and Achievements of the plan project “Village Adoption for Empowerment and Capacity Building Ensuring Livelihood of Fisherfolk in Central Kerala” at a glance

Training programmes conducted as part of the project

Sl.No	Name of the training programme	Date of training	No.of farmers	Duration (Days)	Venue
1.	Freshwater fish farming-problems and prospects	31/5/2017 to 1/6/2017	121	2	Seminar hall KUFOS
2.	Diversification of Aquaculture-prospects and problems	10/7/2017 to 12/7/2017	62	3	Seminar hall KUFOS
3.	Training programme on Hygienic handling and fish drying	23/10/2017	35	1	Andhakaranazhi
4.	Training programme in recent trends in Aquaculture	7/11/2017 to 10/11/2017	84	4	Seminar hall KUFOS
5.	Training programme on cage culture and Pen culture	19/12/2017	64	1	Payyanur
6.	Training programme on cage culture and Pen culture	20/12/2017	51	1	Chervathoor

1.Total number of farmers trained during the year 2017-18	= 417
2.Cage culture units started	=53 units, No. of beneficiaries =162
3.Total area brought under freshwater fish farming	=2.12 acres
4.Total number of seeds distributed to the farmers (Seabass, Pearlsport, Carp seeds)	=15,550
5.Demonstration units established by KUFOS	
Pen culture	= 4nos.
Fish drying units	=4nos.
6.Household survey conducted	=500
7.Standardization of New technologies under trial culture cum demonstration	
1. Pen culture of seabass -1	
2. Pond culture of seabass-1	
3.Cage culture of Silver pompano (Valavody)-1	
10.Qty. of fish harvested	
1.Vatta harvesting on 26/1/2017	- 250kg
2. Chembally on 8/12/2017	-180kg
3. Pearlsport on 23/12/17 (Panangad)	-600kg (partial harvesting from 3 sites)
4. Seabass on 23/12/2017 (Kottuvally)	-200kg (Partial harvesting)

CONCLUSION

The project “Village Adoption for Empowerment and Capacity Building Ensuring Livelihood of Fisherfolk in Central Kerala” implemented by KUFOS during the year 2017-18 helped to augment the inland fish production from the backwaters, increasing the income of the fisherfolk and creating more employment opportunities to them. At present the fisherfolk along the costal areas, especially those who are operating various inland fishing gears such as Chinese dip nets, stake nets etc. are facing various constraints of which the most severe one is the low catch in their fishing gears. Providing alternative livelihood occupation in addition to their primary occupation helped them in increasing their per capita income to a great extent. The promotion of diversified aquaculture practices like pen culture and cage aquaculture which are less risky in nature compared to shrimp farming has been readily accepted by the farmers and has proved that it is a profitable and cost-effective technology. Successful conduct of these practices under this project would be extremely useful in the future dissemination of these technologies to further areas where similar waterbodies exist. Similarly, establishment of demonstration units in fish drying in areas affected by natural calamities and training imparted to the womenfolk have helped in providing gainful employment to them and ensured better quality products in the domestic markets. As a result of the training imparted to the freshwater fish farmers and subsequent distribution of fish seeds to them, more farmers are interested in fish farming and coming forward to take up this practice in their backyards. Such an approach in various villages will definitely help to increase the freshwater fish production of our State in future, leading to a substantial increase in their happiness and prosperity index.

CAGE AQUACULTURE – BENEFICIARIES



SHYLESH V G KOTTUVALLY



ARUN T R KOTTUVALLY



TITUS P A THURUTHIPPURAM



JOBY K F THURUTHIPPURAM



JOICY PA THURUTHIPPURAM



FRANCIS K O THURUTHIPPURAM



MANIKKUTTAN P PÆTHURUTHIPPURAM



FRANCIS K C THURUTHIPPURAM



SILJA PADAMATTUMMEL THURUTHIPPURAM



ANCY MICHEL THURUTHIPPURAM



AJEES H THURUTHIPPURAM



SURESH BABU KOTTUVALLY



SHAJAN K O THURUTHIPPURAM



SUMESH K V KOTTUVALLY



ALBIN K F ANAPUZHA



ANEESH AGUSTIN AYYAMPILLY



MANU K B AYYAMPILLY



VINCENT C C THURUTHIPPURAM



AJISH VELOTTUPURAM



K G SOMAN CHENDAMANGALAM



SHAMON C S THURUTHIPPURAM



MAHESH CHENDAMANGALAM



PRAVEEN P P KOTTUVALLY



FRANCIS SAJI MULAVUKAD



SOMAN K T KOTTUVALLY



SAREESH A S KOTTUVALLY



SREEKUMAR T J KOTTUVALLY



JOMON AYYAMPILLY



PRATHAPAN A G KOTTUVALLY



DINU M L KOTTUVALLY



ANTONY ANSON MULAVUKADU



ABEENA KHABEER METHALA



SAJEEV K R KOTTUVALLY



SHIBEESH METHALA



KANNAN T B CHERUVYPPU



SHAJI T K KOTTUVALLY



JOSEPH KUNJACHAN GOTHURUTH



CEASOR THOMAS PUTHENCHIRA POYYA



venu cheriyappilly



salim m a mattupuram manjali



Muhammed Hafsal Mattupuram Manjali



Mujeeb Rahman Mattupuram Manjali



Muhammed Raffi A K Mattupuram Manjali



Muhammed Farook Mattupuram Manjali



Shameer A A Mattupuram Manjali



Prigith P G Manjali



SHAMEER M A MANJALI



NIHAB P B MANJALI MATTUPURAM



MANOJ AYYAMPILLY



SHIJU NJARAKKAL



SUNNY P E KRISHNANKOTTA



SINOJ K P KRISHNANKOTTA



SURESH K G KOTTUVALLY

1. Village adoption for empowerment and capacity building ensuring livelihood of fisherfolk in central Kerala.
2. Farm Advisory Services for Fisheries
3. Fisheries Technical and Portal Unit
4. Establishment of Farm Radio Station for hastening fisheries development in the State.
5. Earn While you learn
6. Exhibition Unit with minibus for Field consultancy/ lab to land service
7. Center for field consultancy and Data analysis
8. Maintenance of Museum
9. Modernization and Upgradation of Instructional field training facility
10. Cage culture at RMP canal
11. Model Fish processing plant and training center

No.of Exhibitions conducted/ participated during the year 2015-16 (10 nos.)

Exhibition-professional course guidance seminar organized by Mathrubhumi printing and Publishing company at TDM hall, Kochi	30/5/15
International workshop on marine ecosystems and climate change in India	30/7/15 to 31/7/15
Exhibitions organized by KUFOS as part of the two day training programme on "Prospects of <i>Litopenaeusvanammei</i> culture in Kerala"	20/8/15 to 21/8/15
Exhibition "Onakazcha-2015" organized by Maradu Municipality	23/8/15 to 27/8/15
Exhibition organized by KSIDC "WE summit-2015"	19/11/15
Exhibition organized by CMFRI, AFS, and ICAR at Radisson Blue, Kochi "5 th International Symposium on Cage Aquaculture in Asia CAA5"	25/11/15 to 28/11/15
19 th Kochi International Book Festival organized by Antharashtra Pusthakotsava Samithy	4/12/15 to 13/12/15
Exhibition "VAGRA 2K15" conducted by Mar Athanasius College, as part of their Diamond Jubilee celebrations at Kothamangalam	26/12/2015 to 3/1/2016
International conference on Towards a Sustainable Blue Economy : Production, Strategies and Policies jointly organized by KUFOS, and Nansen Research Centre, India during 4 to 6, February 2016	4/2/2016 to 6/2/2016
Panchayath day celebrations, Adlux convention, Ankamali	19/2/16 to 20/2/16



Exhibition stall set up at Radisons Blue during “5th International Symposium on Cage Aquaculture in Asia CAA5”-2015



Exhibition stall set up during “Onakazcha-2015” organized by Maradu Municipality

Seminars/workshop/Symposia organized

1. One- day workshop on Edible Fish Cultivation in association Malayala Manorama on 25/4/2015 at Layam ground, Tripunithura
2. Anti- Tobacco campaign organized on June 2nd 2015 to make aware of the people on the negative impact of tobacco under the Pandit Karuppan Chair
3. Two day training on “Prospects of Litopenaeus Vannamei culture in Kerala” on 20th and 21st August 2015 at KUFOS, Panangad
4. Pandit Karuppan Chair- World Fisheries Day was celebrated in a befitting manner on 20th and 21st November 2015 by conducting a rally, training programme, open house, exhibition and quiz competition for VHSE students
5. Training programme on “Managing Self” organized by the Central Board for workers Education from 22nd to 23rd March 2016 for the teachers and staff of KUFOS

Participation in seminars/symposia/workshop etc.

Dr.Daisy.C.Kappen

1. Participated in the India-EU concluding workshop on Marine Ecosystems and Climate in India jointly organized by Nansen Environmental Research Center(India) (NERCI) and Kerala University of Fisheries and Ocean studies on 30 and 31 July 2015.
2. Participated in the 5th International symposium on Cage Aquaculture in Asia (CAA5) from 25-28 November 2015, Kochi
3. Participated in the training course on “Gender Analysis & Mainstreaming in Agriculture” during 02/1/2016 to 22/1/2016(21 days) at the Division of Agricultural extension, ICAR-IARI, New Delhi.
4. International conference on Towards a Sustainable Blue Economy : Production, Strategies and Policies jointly organized by KUFOS, and Nansen Research Centre, India during 4 to 6, February 2016

5. Participated in the interactive seminar on “Science and Technology for Indigenous Development in India” organized by the Indian Science Congress association cochin chapter on 28th and 29th March 2016.

TV programmes telecasted

1. TV programmes–TV programme on “cage aquaculture” telecasted on 1/11/2015 at 10.pm and retelecasted on 7/11/2015 at 7.30 am in the surya TV programme “Varthakkappuram”
2. TV programme telecasted by the Delhi Doordarshan National Kissan channel in the programme “Kheth Khalian” on 13/1/2016 at 7am and 1pm

Publications in the conferences/seminars/workshop

1. Purushan K.S, Prasada Rao C.V and Rajendran S, Ecotourism potential of Vembanad-kol : A common heritage wet land system, Kerala, India Paper presented in the world Ocean Science Congress 5-8 February 2015, Kochi pp 202.
2. Purushan K.S, Raju M S, Sanju K, Salini N.S and Henamol A A indigenous technical knowledge as a reliable tool for the progress of artisanal fisheries in Kerala, Paper presented in the world Ocean Science Congress 5-8 February 2015, Kochi. pp 5-38
3. Purushan K.S, Raju M S, Rajeesh P.M, Anju M.S and Reshmi M.R Empowering and capacity building as imperative to ensure livelihood and socio-cultural advancement of traditional fisherfolk in Kerala. Paper presented in the world Ocean Science Congress 5-8 February 2015, Kochi.
4. Daisy.C.Kappen, Mohanakumaran Nair C, Raju M s, Dinesh K, Salin K.R and Saneer N S, Standardization of cage culture practices of *Lates calcarifer* (Seabass) using farmer participatory approach, paper presented in the world ocean science congress during 5-8 February 2015 at Kochi
5. Daisy.C.Kappen, Madhusoodanakurup, B, Mohanakumaran Nair C, Raju M S, Dinesh K, Salin K.R and Saneer N S, Cage culture of pearlspot *Etroplus suratensis* for livelihood enhancement of the fisherwomen of Central Kerala, paper presented in the 5th International symposium on Cage Aquaculture in Asia 25-28 November, 2015, Kochi world ocean science congress during 5-8 February 2015 at Kochi
6. Daisy.C.Kappen, Madhusoodanakurup, B, Mohanakumaran Nair C, Raju M S, Dinesh K, Salin K.R and Saneer N S, Participatory approach for standardizing cage culture of giant trevally *Caranx ignobilis* in Thiruthipuram backwaters, Kochi, Kerala, paper presented in the 5th International symposium on Cage Aquaculture in Asia 25-28 November, 2015, Kochi.
7. Daisy.C.Kappen, Mohanakumaran Nair C, Raju M S, Dinesh K, Salin K.R, Saneer N S and Mithun Sukumaran, Pen culture of giant trevally *Caranx ignobilis* as a livelihood for the fisherfolk in Central Kerala. paper presented in the International conference on “Towards a Sustainable Blue Economy: Production, Strategies and Policies” during 4th -6th February 2016, Kochi
8. Dinesh K. Daisy.C.Kappen, Akhil P.B & Geeji M.T, & Nair C.M, Aquaculture Indices of Deccan mahseer, *Tor khudree* transplanted to the low lands of Kerala while stocked with Indian major carps, Int. journal of Science, Environment and Technology, vol.4, No.4, Aug 2015, pp 1080-1088.

Popular Articles

Dr.Daisy.C.kappen

1. Brochures- cage culture of pearlspot, Cage culture of Seabass, Cage culture in Chinese dipnets, Aquarium keeping (in English), Aquarium keeping as a hobby(Malayalam), A M Michel aquarium, Teaching, research and extension activities of KUFOS.
2. Leaflet on teaching, research and extension activities of KUFOS
3. Book let-Vannamei shrimp culture
4. Composite Fish culture -MalayalaManorama daily dt.25/4/2015
5. Report of the various activities of RKVY funded project Samagramatsyagramam published in "Karshakasree" November 2015
6. CD on teaching research and extension activities of KUFOS
7. Booklets on teaching research and Extension activities of KUFOS (2nos)
8. Challenger-Newsletter of Kerala University of Fisheries and Ocean studies (KUFOS)-3nos

Dr.K.S Purushan

1. The significance of Chinese dip net in back water fishing
2. How is sustainable fisheries development?
3. Azhakadal Matsyanayam-poraymakal thiruthalukal
4. Matsyathozhilalikkalkku avagana
5. Jala avasavyavasta neridunna paristika velluvilikalum parihara margangalum

Resources generated

1. Engaged classes to the farmers in the one day workshop on Edible fish cultivation jointly organized by KUFOS and Malayala Manorama on 25/4/2015
2. Engaged classes to the farmers on the topic "Fish farming" in the one day seminar and workshop organized by Muvattupuzha Residence association and Janamaithry Police Station on 29/5/2015.

KERALA UNIVERSITY OF FISHERIES AND OCEAN STUDIES

ABSTRACT OF ACCOUNTS FOR THE FINANCIAL YEAR ENDED 31-03-2018

Receipts	Sch edu le	Amount As on 31-3-2018	Amount As on 31-3- 2017	Payments	Sch edu le	Amount As on 31-3-2018	Amount As on 31-3- 2017
Opening balance	I	31,83,89,137.00	17,48,98,880	Plan Expdtr.	X	17,67,73,097.00 24,00,000.00	19,39,53,075
Receipts from Govt. of Kerala	II	29,11,10,000.00	43,57,09,000	Non-Plan expdtr.	X	15,12,53,774.00	13,30,24,131
Receipts from EAPs	III	50,29,663.00	1,14,83,113	Payments from I R	XI	634470.00	31,81,069
Internal receipts	IV	41830575.30	2,84,56,812	Debt head -do- PVP	XII	1,74,35,556.00 5,000.00	1,54,52,393
Other misc. receipts	V	5,00,808.00	3,85,488	Pension	XIII	0	0
GPF receipts		6,120.00	1,87,500				
DoR recoupment		9670.00					
Bank interest received	VI	72,24,645.13	76,42,922	GPF closure & withdrawal	XIV	1,79,40,816.00	1,19,52,034
Receipt from ICAR	VII	2,16,05,000.00	1,039 1,87,000	ICAR Expenditur	VII	2,09,62,717.00	0
Debt head- pension	XIII	2,76,560.00	3,50,345	Debt head- pension	XIII	3,50,345.00	1,96,705
Puduvype debt head	VIII	9,13,167.00	8,68,008 5000 16,000	EAP expenditur e	XV	1,89,06,569	82,03,554
Debt head	IX	2,60,21,032.00	2,41,40,991 20,000	Closing balance	XVI	30,62,54,033.43	31,83,89,137
TOTAL		71,29,16,377.43	68,43,52,098			71,29,16,377.43	68,43,52,098

**BANK RECONCILIATION STATEMENT IN RESPECT OF A/C No.67167440116
FOR THE YEAR 2017-18**

Particulars		Amount in Rupees
Opening balance as per o ce A/c as on 1-4-2017		15,66,74,562
Add:		
1. Receipt from Treasury Savings Bank A/c	7,19,03,000	
2. Receipt from External Aided Projects	50,29,663	
3. Miscellaneous credit etc	1,07,049	
4. Bank interest	24,32,602	
5. Transfer from Internal Receipt A/c	3,00,00,000	
6. To be transferred from ICAR DG (rebooking)	1,00,47,850	
7. Refunds	3,93,759	
		11,99,13,923
TOTAL		27,65,88,485.00
Less:		
1. Total withdrawals during the year 2017-18 (Statement I attached)		25,11,28,873.20 24,00,000.00
Balance as per o ce A/c as on 31-3-2018		2,30,59,611.80
Add: Amount of un cashed cheques (Annexure 1)		5,94,047.00
Cheque to be issued to IR a/c		<u>19,16,437.00</u>
Total		2,55,70,095.80
Less:wrong debit of cheque No.803308 dt.31.3.16		1,41,500
Cheque to be credited- ICAR (17-18) (Rs.100,47,850 – 1400)		1,00,46,450
Excess withdrawal by bank (14-15&17-18)9+959.67		968.67
		1,01,88,918.67
Balance as per Bank Pass Book as on 31-3-2018		1,53,81,177.13

Statement I

DETAILS OF TOTAL WITHDRAWAL FROM A/C NO.67167440116 DURING THE YEAR 2017-18

Particulars		Amount in Rupees
Actual Gross Expenditure as per statement (Schedule -X)		33,39,90,804.00
Less:		
1. Total suspense for the year (Schedule IX)	2,60,21,032.00	
2. School/UE/DoR, etc expenses	6,39,73,518.00	2,66,74,039.00
3. Expenses incurred from pension a/c		
4. Puduvype expenses	93,35,990.00	17,52,87,368.00
5. Treasury Exps (5,21,71,170-28,88,381)	4,92,82,789.00	
Total deduction		
Net withdrawal		15,87,03,436.00
Add:		
1. Suspense & other payments during the year(Schedule XII)	8,21,78,192.00	
2. ICAR Re-booking	1,00,47,850.00	
3. Bank charges	4,628.20	
4. Duplication in expenditure (amount of advance transferred to UE a/c)	1,94,767	9,24,25,437.20
Total withdrawals during the year 2017-18		25,11,28,873.20

Schedule- I**Opening balances of various Accounts as on 01-4-2017**

SINo	Names of various accounts	Amount
1	Treasury Savings Bank A/c	100
2	Salary A/c – 67167440116	15,66,74,562
3	Pension A/c	3,86,876
4	Internal Receipts A/c	6,02,98,437
5	GPF A/c	36,21,552
6	Special TSB A/c for GPF	1,05,62,068
7	ICAR DG	17,95,006
8	Puduvype salary a/c	1,08,140
9	Schools/UE/DoE etc (Schedule attached)	8,49,42,396
TOTAL		31,83,89,137

Schedule - II**Receipts from Govt. of Kerala**

SINo	Details of grant-in-aid received	Amount (in Rs.)
1	Non-plan grant-in-aid	13,88,05,000
2	Plan grant-in-aid	13,70,00,000
3	NABARD – RIDF Fund	1,53,05,000
TOTAL		29,11,10,000

Schedule - III**Receipts from External Aided Projects**

SINo	Names of various projects	Amount (in Rs.)
1	CMLRE	37,834
2	NBFGR	9,66,476
3	D B T Projects	6,97,851
4	SERB Projects	4,01,369
5	PDF	17,41,133
6	DHR project	9,95,000
7	ICMR fellowship	1,90,000
TOTAL		50,29,663

Schedule - XVI**Closing balances of various accounts as on 31-3-2018**

SINo	Names of various accounts	Amount
1	Treasury Savings Bank A/c	16,99,24,311.00
2	Salary A/c – 67167440116	2,30,59,611.80
3	Pension A/c	3,04,897.00
4	Internal Receipts A/c	5,42,13,942.03
5	GPF A/c	87,551.50
6	Special TSB A/c for GPF	1,05,62,068.00
7	ICAR DG	25,38,436.00
8	Puduvype salary a/c	1,69,415.00
9	School balances	4,53,93,801.1
	TOTAL	30,62,54,033.43

Schedule - VI**Interest received from banks**

SINo	Names of various accounts	Amount (in Rs.)
1	Salary A/c – 67167440116	24,32,602.00
2	Pension A/c	11,518.00
3	GPF A/c	70,961.00
4	ICAR DG	1,01,412.00
5	Puduvype salary a/c	10,746.00
6	Internal Receipt a/c	12,65,713.00
7	Special TSB A/c	0.00
8	Interest received in schools/UE/DE Accounts	33,47,341.00
	TOTAL	72,40,293.00

Schedule – XV**External Aided Projects Expenditure**

SINo	Names of various Projects	Expenditure incurred at Hqrs.	Amount transferred to PIs/FA	Total
1	DBT –Transferred to Kerala Uty.	0	1,19,42,119	1,19,42,119
2	CMLRE Projects	0	3,84,340	3,84,340
3	NFDB Project	33,24,925	1,25,000	34,49,925
4	HRD	7,39,464	0	7,39,464

5	KCSTE	799544	0	799544
6	SERB	11,00,000	3,50,000	14,50,000
7	NBFGR	0	1,41,177	1,41,177
7	Institutional charges	0	0	0
TOTAL		59,63,933	1,29,42,636	1,89,06,569

INFRASTRUCTURE

PLAN FUND PROPOSALS APPROVED FOR THE YEAR 2017-2018

Sl. No.	NAME OF WORK	AMOUNT (IN LAKHS)
1.	Construction of Physical Amenity Centre Phase 4	50.00
2.	Flat Complex for Staff at KUFOS HQ Phase 4	50.00
3.	Construction of Research Complex Phase III	50.00
4.	Construction of Seminar complex Phase 4	200.00
5.	Construction of Compound wall at KUFOS Phase 2	50.00
6.	Construction of International HostelPhase 1	50.00
7.	Construction of Staff quartersPhase 2	100.00
8.	Renovation / Repair & Maintenance (HQ)	80.00
9.	Maintenance of Quarters	25.00
10.	Vertical Extension to the existing ladies hostel	200.00
11.	Up gradation of Play ground	50.00
12.	Installation of Solar panel (HQ)	50.00
13.	Development of Fish farms	185.00
14.	Campus Road Development	25.00
15.	RO Plant at KUFOS HQ	25.00
16.	Compound wall FS, Puduveypu Phase 4	35.00

PLAN FUND PROPOSALS APPROVED FOR THE YEAR 2018-2019

Sl.No	HEAD	AMOUNT (IN LAKHS)
I	INFRASTRUCTURE	
1	Construction works at KUFOS HQ includes Flat complex for staff, Research Complex, Seminar Complex , Compound Wall International Hostel And Staff Quarters,	375

1. CONSTRUCTION OF PHYSICAL AMENITY CENTRE AT KUFOS HEADQUARTERS

The common amenity centre which acts as a business centre for the students and faculty to accommodate fish stalls for marketing the products from the fish farms of the university, fish kiosks to sell value added products, cafeteria, co-operative society, banking facilities, photocopying, ATM, post office, super market, students centre, parking space as per by-laws etc. In addition to this, a fully furnished and air conditioned seminar hall in the top floor is envisaged

The building is of RCC framed structure (G+2 floors) having a plinth area of 575 Sqm in Gr.FL, 575 Sqm in 1st Floor and 575 Sqm in 2nd floor. Thus the building shall be ultimate with a total plinth area of 1725 Sqm .

The 1st and 2nd phase of the work is completed by using the plan fund allotment for the year 2014-15 (100 lakhs) and 2015-16 (160 lakhs). The 3rd phase using the plan fund allotment for the year 2016-17 (225 lakhs), the 4th phase of the using the plan fund allotment for the year 2017-18 (50 lakhs) and the 5th phase of the work using the plan fund allotment for the year 2018-19 (100 lakhs) are in progress. The first, second, third and fourth phases are entrusted with BSNL and the last phase is entrusted to M/s KSCADC. In this last phase, various items such as aluminum composite panel cladding using aluminum sections and vision glass panels, compound wall , landscaping and electrification work are included.



2. FLAT COMPLEX FOR EMPLOYEES

To overcome the shortage of quarter's facility for teaching and non-teaching staff in the University, it is decided to construct a flat complex for the employees. The flat complex comprises of six units and each unit shall accommodate one office room, two bed rooms with attached toilets, dining hall, drawing room, kitchen, work area and servant's toilet.

The building is designed as RCC framed structure (G+2) having a plinth area of 370 Sq.M in each floor which comprises two quarters in each floor and a

central staircase. Thus the total plinth area shall be $3 \times 370 = 1110$ sq.m. Thus the building will be ultimate with G+2 when completed with no provision for future expansion. BSNL Civil wing was entrusted with the construction work in a phased manner according to the availability of funds. By using the plan fund allotment, all the six units are completed. Now, the GF units are used as Guest rooms.

During 2014-15 plan fund of Rs.100 lakhs is allotted for phase -1 , in the year 2015-16, Rs.100 lakhs allotted for phase-2 and in the year 2016-17, Rs.150 lakhs and, in the year 2017-18, Rs.50 lakhs for phase- 4 is allotted. The work upto phase 4, i.e. building work is completed. An amount of Rs. 50 lakhs is allotted for phase 5 for the provision of GI fabric wire fencing with GI posts around newly constructed twin type quarters and adjacent ladies hostel building; including double leafed gate formed with GI frame and GI fabric wire., paving blocks around the building and landscaping. This last phase of work is entrusted to KSCADC.

3. CONSTRUCTION OF RESEARCH COMPLEX AT KUFOS HEAD QUARTERS PANANGAD

The building is RCC framed structure (G+1 floor) having a plinth area of 455 Sqm in GF and 455 Sqm in 1st Floor. The work is, taken up in a phased manner. The building is used for various research activities of the University which accommodates Molecular lab, Microbiology lab, Histopathology lab, Processing hall and Aqua clinic.

First ,second and third phase construction of the Research complex was entrusted with M/s. BSNL and fourth and fifth phase construction was entrusted to KSCADC. First phase work was completed and second , third, fourth and fifth phases work are in progress. During 2013-14 plan fund Rs.155 lakhs is allotted for phase -1, 2016-17 plan fund of Rs.101.50lakhs for phase -2 ,2017-18 plan fund of Rs.50 lakhs for phase 3, 2017-18 plan fund of Rs.75 lakhs for phase 4 and 2018-19 plan fund of Rs.68lakhs for phase 5 .The last two phases includes the external works such as paving tiles, landscaping, rain water harvesting system etc.

4. CONSTRUCTION OF SEMINAR COMPLEX AT KUFOS HEAD QUARTERS PANANGAD

The building shall be of RCC framed structure with floor height 10.50m having a plinth area of 1044sq.m in

ground floor accommodating 436 seats and 618sq.m.in first floor accommodating 184 seats. Thus the building shall be ultimate with a total plinth area of 1662 sq. m to accommodate a total seating capacity of 618.The Seminar Complex is designed as a main air-conditioned Seminar Hall, acoustically treated and provides with a centrally controlled audio system .This spacious and well-equipped facility is well suited for conducting of seminars, conferences, conventions and cultural programmes etc. The hall can also be used for screening Film.

During the plan fund 2014-15 Rs.100 lakhs for phase 1 , 2015-16 plan fund Rs.150 lakhs for phase 2 , 2016-17 plan fund Rs.25 lakhs for phase 3 ,2017-18 plan fund Rs.200 lakh for phase 4 and 2018-19 plan fund Rs. 100 lakhs for phase 5 had allotted .The construction of phase 1 & 2 were completed and phase 3, 4 & 5 are in progress. The total project cost is Rs.1275 Lakhs.



10.COMPOUND WALL AT FISHERIES STATION PUDUVEYPU

The Puduveyypu campus can be broadly divided into the dry land near the entrance on the western side, the area occupied by ponds adjacent to it on the northern side and eastern side and the mangrove forest area on the eastern half separated by a canal. Most part of the boundaries has no compound wall, hence to protect the boundaries of the Fisheries Station from encroachment and trespassing it is very essential to construct compound wall throughout the boundaries.

First phase of the compound wall was constructed by M/s. BSNL for a length of 186metre to an amount of Rs.17, 69,594/- under plan fund 2012-13. Second phase of the construction compound wall was entrusted with M/s.FIT at an estimate cost of Rs.50, 00,000/-for a

length of 205m, under plan fund 2013-14 and is completed.An amount of Rs.50 lakhs is allocated for the construction of compound wall (phase III) is in progress. An amount of Rs.35 lakhs (Rupees Thirty five lakhs only) is allotted for the construction of compound wall (phase 4) at Fisheries Station Puduveyypu. The proposed length of the compound wall is 150m. Considering the low bearing capacity of the soil under- reamed pile foundation are proposed for the compound wall.

11.VERTICAL EXTENSION TO THE EXISTING LADIES HOSTEL AT NE, KUFOS.

An amount of Rs.200 lakhs is allotted for the Vertical extension of UG Hostel , by constructing one floor over the existing UG hostel for ladies in the north-eastern campus at KUFOS HQ Panangad. The work is completed and now onwards, we can accomodate 60 students for the the additional batch of BFScand Btech food science in addition to the 120students residing in the hostel.



12.INSTALLATION OF SOLAR PANEL –

An amount of Rs.50 lakhs is allotted for the Installation of Solar panel at KUFOS HQ Panangad. Work is entrusted with M/s. KEL as deposit work, is in progress.

13.RO PLANT-

An amount of Rs.25 lakhs is allotted for RO Plant. It is proposed to install four numbers RO plant in the various campuses of KUFOS.The work includes Filter Feed Pump, Super Sediment Filter, Super Iron Removal Filter, Super Activated Carbon Filter, RO System 1000 lph, Treated Water Tank etc. The work is entrusted with KSCADC , is in progress

14.CONSTRUCTION OF PG HOSTEL FOR WOMEN

The University had started new PG courses and doctoral programmes. The women's hostel capacity is grossly inadequate, hence it is essential to construct new P.G. Hostels for women.

The building is of RCC framed structure (G+2 floors) with floor height of 3.00m in ground floor and 3.20 m for other floors having a plinth area of 688 Sq.M in each floor. Thus the building shall be ultimate with a total plinth area of 2064 Sq.M. The building consisted of thirty six triple seated rooms , dormitory, warden room, waiting room, dining room , Pantry, kitchen, work area ,care taker room, store room , toilet blocks etc. . The building will have light weight sheet roofing laid on steel trusses for topmost floor After the completion of the whole project, 150 numbers students can be accommodated. BSNL Civil wing was entrusted with the construction work in a phased manner

First and second phase construction was entrusted with M/s. BSNL, first phase work was completed and second phase work is in progress. During 2013-14 plan fund Rs.250 lakhs is allotted for phase -1 and 2016-17 plan fund of Rs.97.21lakhs for phase -2. In the first phase entire ground floor (688sqm), First floor (251sqm) and in the second floor columns raised and light roof laid over the left portion (251 sqm) was completed. In the second phase six rooms with toilet block in each first and second floor of the right portion (north side) of the building with total plinth area 322 sqm (161X2) is under progress.

In the third phase, 2018-19 plan fund, Rs. 100 lakhs is allotted and the work is entrusted with KSCADC and is in progress. The work includes, First floor of area 97.92 sqm above dining of GF and Second floor of area 311.43 sqm in the front left side and also upto the next room of rear stair. In the fourth phase, ICAR fund, Rs. 120 lakhs is allotted and the work is entrusted with KSCADC and is in progress



15.CONSTRUCTION OF PG HOSTEL FOR MEN

An amount of Rs 350 lakhs is allocated for the construction of PG hostel for men & women (phase II). Considering the urgency of accommodating more number of students, it is proposed to increase the rooms by constructing vertical extension. First phase construction of PG hostel for men was entrusted with M/s. BSNL and work is in progress. During 2014-15 plan fund of Rs.200 lakh was allocated for Phase I.

The building is of RCC framed structure (G+2 floors) with floor height of 3.30 m having a plinth area of 688 Sq.M in Gr.FL, 667 Sq.M in 1st Floor and 667 Sq.M in 2nd floor. Thus the proposed building shall be ultimate with a total plinth area of 2022 Sq.M. The building will have light weight sheet roofing laid on steel trusses for topmost floor in future. The work however is, proposed to be taken up in phases. The first phase of construction (Ph.1) is limited to Ground Floor only comprising 688 Sq.M , is completed. An area of 667 Sq.M is taken up as Ph.2, entrusted with BSNL is in progress. An amount of Rs.49.27 lakh is allocated for the construction of PG Hostel for Men (phase 3). This phase includes inbuilt cupboard work and furniture in the Ground floor of Gents hostel.

16.ACADEMIC BLOCK AT HEADQUARTERS

The building is a five storied load bearing structure with a total plinth area 12855m² in which 2571m² in each floor. It is constructed as phased manner and the work is entrusted with M/s.KSCADC. First , second phase, third phase , fourth phase and fifth were completed, utilizing the plan funds allocated during 2011-12, 2012-13, 2013-14 ,2014-15 and 2015-16 The first phase includes various labs in the ground floor. The second phase includes class rooms, staff rooms, stair cabin and toilets in ground floor, first floor and second floor. The third phase includes computer lab, PG lab etc in ground floor, first floor and second floor. The fourth phase includes UG labs, toilets, stair cabin etc in ground floor, first floor and second floor. The facilities such as mini conference room, PG class rooms etc are provided in the fifth phase. The sixth phase(A&B) utilizing NABARD/RIDF FUND amounting Rs.4000 Lakhs expected to be completed by Dec.2020.

LIBRARY

Staff strength

- | | |
|--------------------------------------|------------------------|
| 1. Assistant Librarian | : Kunjumammed V S |
| 2. Reference Officer Hr. Gr. | : P V Vijayalakshmi |
| 3. Reference Officer | : Dr. Ramya Raveendran |
| 4. Library Assistant (on Deputation) | : Mathew George |
| 5. Lab. Asst (Photocopy) | : Rajamma K R |
| 6. Office Attendant | : Arun K J |

Plan for the current academic period

- | | |
|--|-------|
| Total number of books added in the library | : 215 |
| Total number of project reports added in the library | : 164 |
| Total number of thesis added in the library | : 36 |

Details of Departmental meeting conducted with agenda

Conducted 3 periodical staff meetings to improve the quality of services in the library.

Conference/Seminar/Workshop/Invited lectures organized by the Department

1. Koha” Library Automation National Workshop conducted on 20th July 2017 to 22nd July 2017 in collaboration with Kerala Library Association. 78 professionals participated.
2. DELNET one day Regional Seminar conducted on 2nd August 2017 with the financial assistance of Developing Library Network, Delhi. Total participants are 160.
3. Reading Week and Book Exhibition conducted in the month of from 19th to 24th June 2017. Hon.Vice Chancellor inaugurated the program, Sri. K L Mohanavarmma, Novalist and Adv. Ravisankar, awell known speaker were participated in the function. A Book Exhibition on Literature was conducted with various literary competitions for students.
4. The online journal Consortium of ICAR, ie. e-Resources in Agriculture (CeRA) training programme was conducted on 20th July 2017 for PG and PhD students.

Academic achievements of KUFOS Library Staff

1. Smt. Ramya Raveendran, Reference officer, has awarded PhD from Karpagam University on her Research work entitled 'Impact of information technology on resource sharing among management institute libraries in Kerala'.
2. Sri. V S Kunjumammed, Librarian i/c has joined as part time Research Scholar at KUFOS, on his research topic ' Knowledge Management for Agriculture and Rural Development in Grama Panchayath in Digital era'

Academic/Research/Extension activities of Faculty outside the University

1. V S Kunjumammed, Assistant Librarian nominated to Kerala State Higher Education Council for the expert committee on Library and Information Science on request from the Council.
2. V S Kunjumammed also nominated as a member in Library Advisory Committee at Maritime University, Kochi Campus.

Meetings attended by faculty members outside the University

1. Assistant Librarian & Reference Officer attended the CeRA Workshop at CMFRI, Kochi.
2. Asst Librarian has attended Librarians meet at Malayalam University, Tirur.

Utilization of fund for the current month (cumulative details)

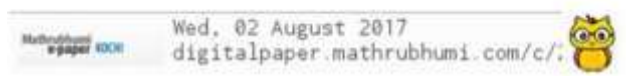
Head	Amount sanctioned (2017-18)	Utilization	Particulars	Balance left
Plan Fund	30 Lakhs	10.67 Lakhs	1.Books & Journals p	19Lakhs

Department in news

1. Delnet Library Net work Workshop' news reported Mathruboomi Daily on 2nd August 2017.

ഡെൽനെറ്റ് ലൈബ്രറി നെറ്റ് വർക്ക് ശില്പശാല ഇന്ന് കുമ്പോസിൽ

കൊച്ചി: ഡൽനെറ്റ് ആസ്ഥാനമായ ഡെൽനെറ്റ് ലൈബ്രറി നെറ്റ് വർക്ക് ശില്പശാല ബുധനാഴ്ച കുമ്പോസിൽ നടക്കും. കേരളത്തിലെ യൂണിവേഴ്സിറ്റികൾ, കോളേജുകൾ, ഗവേഷണ ലൈബ്രറികൾ എന്നിവയിലെ ലൈബ്രറി പ്രൊഫഷണലുകളാണ് പങ്കെടുക്കുന്നത്. ആധുനിക സാങ്കേതിക വിദ്യ ഉപയോഗപ്പെടുത്തി വിഭവങ്ങളുടെ പരസ്പര ഉപയോഗവും സഹകരണവുമാണ് ശില്പശാലയുടെ മുഖ്യ ലക്ഷ്യം. രാവിലെ 10ന് കുമ്പോസ് വൈസ് ചാൻസലർ ഡോ. എ. രാമചന്ദ്രൻ ശില്പശാല ഉദ്ഘാടനം ചെയ്യും. പങ്കെടുക്കാനാഗ്രഹിക്കുന്നവർ കുമ്പോസ് സെമിനാർഹാളിൽ നെമ്പതിന് എത്തിച്ചേരണമെന്ന് കോ-ഓഡിനേറ്റർ പി.എസ്. കുഞ്ഞുജാഹമ്മദ് അറിയിച്ചു.



National Service Scheme

The activities of National Service Scheme (NSS) in KUFOS started with the celebration of World Environment Day Celebrations on 5th June 2018. The

theme of this years' Environmental Day was "One Tree One Student". In association with Social Forestry Department of Govt. of Kerala, the NSS volunteers facilitated planting of 800 saplings in the three campuses of Panangad, Kochi. Most of the tree saplings were of fruit bearing trees. Hon'ble Vice Chancellor, Prof. (Dr.) A. Ramachandran inaugurated the function. Directors, Principal Scientists of ICAR institutes, Statutory Officers, Teaching and non-teaching staff of the University participated in the planting. Sri.Induchoodan, well known environmentalist and Former Conservator of Forest and Former Director of AHADS was the chief guest of the day. He delivered a lecture on "In harmony with nature" giving insights of protecting the nature and environment for sustenance of life.

Biodiversity park

The NSS KUFOS unit was allotted 10 cents of area to be converted as Biodiversity park as part of the Green Protocol as envisaged by the State NSS Cell. In association with Social Forestry Department, 100 large tree saplings were planted in this park.





International Yoga Day Celebrations

International Yoga day was celebrated by the NSS KUFOS unit on 21st June 2017 at KUFOS main campus, Panangad, Kochi. Smt. Amala from the Pathanjali Yoga Training and Research Institute, Palarivattom was the chief guest. Dr. Ranjeet K, NSS Programme Officer welcomed the guest, Shri Ranjith, Assistant Professor Physical Education delivered felicitation and Dr. Binu Varghese, NSS Programme Officer gave the vote of thanks. In her inaugural address Smt. Amala delivered a talk on “Yoga in daily life” and demonstrated pranayama to the NSS volunteers. This was followed by practicing of various yogaasanas by the NSS volunteers.



NSS Day celebration and Orientation Programme for NSS Volunteers

The NSS day was celebrated on 24th September 2017 at the KUFOS main campus. This included a one-day orientation programme for the new batch of NSS volunteers. Dr. Ranjeet K, NSS Programme Officer, KUFOS, gave orientation to the newly inducted volunteers and prepared a road map of activities to be taken up for the current academic year.

Swachhata hi seva

On the direction of NSS State Cell, Kerala University of Science and Technology carried out the following activities as part of the “SWACHHATA HI SEVA” campaign promulgated by the Govt. of India during September 15 to October 2.

Campus Cleaning

The students of two units of NSS cleaned various parts of the campus especially the classroom premises, corridors and outside common toilets.



Tree plantation

KUFOS approached this academic year with an ambitious project of “One Student-One Tree”, which was inaugurated by Hon'ble Vice Chancellor, Prof. (Dr.) A. Ramachandran on 5th June 2017. Subsequently it is planned to plant nearly 1000 tree saplings in the campus by the end of this academic year. As part of the “Swacchata Hi Seva” campaign the volunteers of NSS not only planted trees in the campus but also took the message to the public. In association with the National Highway Authority of India, the students planted flowering plants in the medians of National Highway throughout the length of the campus.



Taking pledge on Swachh Bharat

The NSS unit also facilitated the Pledge taking function on Swachh Bharat Teachers and students of KUFOS took the Swachh Bharat pledge in all the three campuses of the University. Respective Deans/Directors read the pledge to students as directed by the University Grants Commission.



Independence Day

NSS Kufos unit actively participated in the 71st Independence day celebrations at the Main campus. Hon'ble Vice Chancellor, Dr. A. Ramachandran hoisted the National flag.

Eye camp

In association with the NHAI, a five-day eye camp for the drivers of heavy vehicles was conducted in the campus of KUFOS from 2nd to 6th October 2017. The students of NSS actively participated by assisting the officials with enrolling the drivers, distributing pamphlets, managing traffic and providing refreshment for the visitors to the camp. NHAI also provided free spectacles to the drivers



Hygiene Sensitization programme

The students of NSS also conducted a Hygiene Sensitization Programme at the Raman Memorial LP School, Netoor for the 2nd and 3rd standard students. They took classes on developing good sanitary conditions of the premises and maintaining personal hygiene for better health especially focussing on monsoon epidemics. The volunteers motivated the students to take a pledge on segregating and recycling organic waste. Hand made banners on saving water, solid waste management and protecting nature was also displayed during the programme. NSS volunteers also conducted a quiz competition for students and distributed sweets to the students before leaving the school.



Rainwater harvesting system

KUFOS has two rainwater harvesting systems in its campus. The volunteers of NSS inspected the two sites, carried out the cleaning of the premises; they checked the inflow of water to the reservoir tank, removed the blocks in the pipeline due to clogging of leaves and twigs. They also volunteered to inspect the adjoining areas i.e., roof tops, collection pits and pipes to ensure there was effective recharging to the underwater storage tank



Taking pledge on National Integration Day

The NSS unit facilitated the Pledge taking function on “National Integration day”. Teachers, Non-teaching staff and students of KUFOS participated in the programme in which Hon'ble Vice Chancellor, Prof. (Dr.) A. Ramachandran read out the pledge.



Ship of World Youth Programme

Cochin is going to be the Post of Call for next year's “Ship of World Youth Programme”, an initiative of Japan Government from 11th to 14th February 2018 in collaboration with the Ministry of Youth Affairs

& Sports, Govt. of India. As part of the programme, a three-member Japanese Cabinet Committee conducted a preliminary visit on 27th and 28th October and visited institutes of social/cultural importance. Shri I.B. Lenka, Under Secretary, Ministry of Youth Affairs and Sports, Govt. of India, accompanies the guests. Both the NSS Programme Officers of KUFOS, Dr. Ranjeet K and Dr. Binu Varghese, facilitated the activities. The team visited the Port Trust, FRRO, Customs, Cochin University of Science and Technology, Kudumbashree (Women Self Help Group), Snehalayam (Institute for Special Children), EMS Kalari (Kerala Martial Arts) centre, Don Bosco Sneha Bhavan (Orphanage for children) and Kumbalangi model village during the two day visit. KUFOS shall be facilitating the activities next of SWYP in February 2018.



Advisory Committee meeting

The advisory committee meeting of the NSS units of KUFOS was held on 28-11-2017. Shri.GP Sajith Babu, Regional Director, NSS and Shri. K. Sabukuttan, State NSS Officer participated in the meeting chaired by Prof. (Dr.) A. Ramachandran, Vice Chancellor KUFOS. The committee approved the action plan for 2017-18. Dr. Ranjeet K NSS Programme officer welcomed the members and presented the activities of KUFOS NSS units while Dr. Binu Varghese, NSS Programme officer offered the vote of thanks.

Visit of the Russian Delegation

As part of the Indo-Russian Youth Exchange programme a delegation of 48 Russian Youth visited KUFOS for a one-day programme on the 14th of December 2017. They interacted with the NSS volunteers and discussed matters pertaining to 'Role of Youth in Social Reforms' and 'Women empowerment in Kerala'. Prof. (Dr.) A. Ramachandran, Vice Chancellor KUFOS inaugurated the function. Shri. Pankaj Dhamija of the Ministry of Youth Affairs and Sports presented an outline of the programme. Ms. Anna, team leader Russian delegation was the Guest of honour. Later the students presented a cultural programme showcasing the tradition of Kerala for their counterparts from Russia.



National Road Safety week

The National Service Scheme of KUFOS in association with the Sub Regional Transport Office, Thripunithura and Janamaithri Police Station, Panangad organized an awareness programme for students and public on “**Safe Driving**” as part of the National Road Safety Week on 6th January 2018. The aim of this campaign was to emphasize and accentuate people about the need of safe roads travel by applying just simple rules. NSS Volunteers then carried out the awareness campaign to the public by distributing hand-made pamphlets to those violating traffic rules and encouraging those following it by distribution of pleasantries.



NSS volunteers also conducted a flash mob at Madavana Junction to educate the public on the Steps for Road Safety.



Mr. KC Antony, Joint RTO, Thripunithura handled the class on “Road Safety” at KUFOS, Seminar Hall on 11th January 2018. He emphasized the need to consider fellow passengers and pedestrians pivotal while driving as well as educating the public on following the Rules and Regulations for Safe driving.

Republic Day Celebration

NSS KUFOS unit actively participated in the 68th Republic day celebrations at the Main campus. A patriotic song competition was held for students on the day. Hon'ble Vice Chancellor, Dr. A. Ramachandran and Volunteers took oath to safeguard national integration on the day.

Swachhata Pakhwada

A week long programme under the auspices of “Swachhata Pakhwada” was organized by the NSS Units of KUFOS in association with National Highway Authority of India on January 30, 2018. Hon'ble Vice Chancellor Dr. A. Ramachandran inaugurated the function, Lt. Col. Ashish Dwivedi, Regional Officer, NHAI was the chief guest and Shri. Raj Purohit, DGM and Satheesh Nambiar, KATPL offered felicitation. Dr. Binu Varghese, NSS Programme Officer offered the vote of thanks. Following which the NSS volunteers cleared the garbage, unnecessary structures and cleaned the pathways on the side of the National Highway and made the stretch from Lake Shore hospital to KUFOS usable for the public.



Visit of Ship of World Youth Leaders

KUFOS NSS unit hosted the 'Ship for World Youth Programme', an International Programme of the Japan Government and Ministry of Youth Affairs in which youth from 11 countries i.e., India, Australia, Behrain, Chile, Mexico, New Zealand, Russia, Sri Lanka, Tanzania, Japan and UAE visited KUFOS on 13th February 2018. The members interacted with the NSS volunteers and discussed various aspects of culture, education, orientation of youth towards nation building, social activities, gender issues and women empowerment. The students of KUFOS also demonstrated value and skill based education system. Prof. (Dr.) A. Ramachandran welcomed the participants. Dr. VM Victor George, Registrar & Dr. TV Sankar, Director of Research offered felicitation while Dr. Binu Varghese, NSS Programme Officer proposed the vote of thanks.





Award for Best NSS Volunteer

KUFOS has established an award for Best NSS Volunteer. The Award includes a cash prize of Rs. 5000/-, a trophy and a citation. The selection of the best NSS volunteer is based on the criteria given by NSS State Cell. The first NSS Best Volunteer Award was given to Mr. Dawood Nihal of the 2013 BFSc batch during the 4th Convocation Ceremony of KUFOS on 19th February 2018.



Medical Camp

A one-day free medical camp was organized by the KUFOS NSS Unit for the staff and public at KUFOS main building on 14th March 2018 in association with MedEnnov8. More than 100 people participated in the camp in which screening tests for diabetics, cardiac problem and general health was done. The officials of MedEnnov8 provided free consultancy to the public regarding BMI and exercise needed to control the body mass

PHYSICALEDUCATION



The Department of Physical Education, Kerala University of Fisheries and Ocean Studies promoting Physical Education and sports on par with regular academics. The University has well recognized the value of sports and physical activities as a means of developing personality, promoting social harmony and discipline. The department provides ample opportunity to the students to utilize their leisure time with physical activities to reduce their stress in their day-to-day education and academic

life. The University believes in the all-round development of students and hence, apart from success stories in the field of education, it provides encouragement and support to sports in a big way. With this unconditional support, the sports department went on to bring glory to the University in several disciplines of sports. The department has evolved into a team, which is committed to producing sports persons of very high standards.

A well-established physical education and sports unit is functioning in the university with necessary sports and games facilities. The Physical Education and Sports unit divided its activities in two broad categories, intramural and extramural. Sports & Games activities in the University Campus were very much active and alive during the year 2017-2018. The University is slowly but surely making a name for it in the sports field. This year Department has organized Kerala University of Fisheries and Ocean Studies Inter collegiate Sports and Games Meet

Programmes of the Department

- 1) Physical Education class for BFSc 1st year (I semester)
- 2) Physical Education class for B.Tech 1st year (I semester)
- 3) Swimming class for BFSc 2nd year (III semester)
- 4) Sending various teams for the South Zone/ All India inter University Championship
- 5) Sending various teams for the All India Inter Agriculture University sports and games meet
- 6) Conducting KUFOS inter-collegiate Sports and Games Meet.
- 7) Conducting Coaching camps for various teams
- 8) Yoga class
- 9) Aerobics class



Competitions:

During the period around 100 students participated in the extramural programme in sport and games competitions at various levels. Various sports in which the students participated are as follows: Football, Cricket, Badminton, table tennis, Athletics, Basketball Boxing, Volleyball (Men and Women) various open and invitational tournaments in which the students participated in the District League tournaments, inter-collegiate inter-university and All India inter agriculture University sports and games meet competitions.

Football:

The University team participated in Ernakulam District football League, and inter-university competitions.

Cricket:

The University team participated in Ernakulam District cricket League, and inter-university competitions.

Basketball:

The University Men and Women team participated in, All India inter agricultural university sports meet and inter-university competitions.

Volleyball:

The University Men and Women team participated in All India inter agricultural university sports meet, and inter-university competitions.

Table tennis:

The University Men and Women team participated in All India inter agricultural university sports meet, and inter-university competitions.

Shuttle badminton:

The University Men and Women team participated in All India inter agricultural university sports meet, and inter-university competitions.

Athletics:

The University Men and Women team participated in All India inter agricultural university sports meet.

INFRASTRUCTURE DEVELOPMENT

The University dedicated their time and effort for the development of the sports infrastructure of the University during the year.

Play Field Facilities

- Track and Field (outdoor) Football, Cricket.
- Shuttle Badminton (outdoor-2NOS)
- Basket ball court (outdoor-2NOS)
- Volley ball court (outdoor-2NOS)
- Table Tennis.
- Swimming pool





KERALA UNIVERSITY OF FISHERIES AND OCEAN STUDIES

Panangad, Kochi- 682 506, Kerala , India

Phone: 0484 -2700964, 2700598, Fax: 0484-2703782

Website:www.kufos.ac.in