



Department of Fisheries Resource Management

College of Fisheries

Acharya Narendra Deva University of Agriculture and Technology, Kumarganj, Ayodhya – 224 229, U.P.

BRIEF ABOUT THE DEPARTMENT

The Department of Fisheries Resource Management (FRM) came into existence since the inception of the College, during the academic year 2006-07. Postgraduate programme (M.F.Sc.) and Ph.D. program started functioning in the academic year 2019-20 and 2023-24 respectively, with the admission of two students each. The no. of seats in Masters Programme (M.F.Sc.) now increased to seven (7) nos. The Department of FRM works on various aspects of fish diversity, biology and management of fisheries resources in Eastern Uttar Pradesh.

OBJECTIVES

- Impart quality education in fisheries resource management and conservation.
- Take up qualitative and quantitative as well as cutting-edge research on aquatic resource.
- Bring out location specific strategies and techniques for fisheries sustainability
- Take up extension activities for technology dissemination and fishermen empowerment.

VISION

Develop educated and technically perfect manpower to meet the burgeoning demand of fisheries resource management personnel in the state of Uttar Pradesh in general and eastern U.P. in particular.

MISSION

Promoting fisheries resource conservation education for genetic stability of commercial fish and wetland fisheries for sustainable utilization and technology development for maximizing natural resource utilization in capture-based culture fisheries.

THRUST AREAS

- Fish taxonomy and biology
- Fish stock assessment
- Inland fisheries management and Conservation of fisheries resources

FACULTY MEMBERS

The department at present has 04 (four) faculty, having expertise in various fields of Fisheries Resource Management.

Name	Designation	E-mail	Mobile No.
Dr. C. P. Singh	Professor & Head	cpsfish@rediffmail.com	7309566578
Dr. Radhakrishnan Kizhakke Veettil	Associate Professor	krishnaradh76@gmail.com	8730854369
Mr. Sunil Kant Verma	Assistant Professor	sunilfisheriesdeptt@gmail.com	9410515192
Dr. Jyoti Saroj	Assistant Professor	jyotisaroj31@gmail.com	9409612237

PROGRAMMES

Levels	Name of the Course
Doctoral	Ph.D.in Fisheries Resource Management
Postgraduate	M.F.Sc. in Fisheries Resource Management

ACADEMICS

The department offers M.F.Sc. and Ph.D. in Fisheries Resource Management

Teaching

B.F.Sc. courses offered by Department

Sl. No.	Course No.	Course Title	Credit load
1.	FRM-111	Taxonomy of Finfish	3(1+2)
2.	FRM-112	Taxonomy of Shellfish	2(1+1)
3.	FRM-121	Anatomy and Biology of Finfish	3(2+1)
4.	FRM-122	Inland Fisheries	3(2+1)
5.	FRM-123	Marine Biology	3(2+1)
6.	FRM-211	Physiology of Finfish and Shellfish	3(2+1)
7.	FRM-312	Marine Fisheries	3(2+1)
8.	FRM-313	Fish Population Dynamics and stock Assessment	3(2+1)
9.	FRM-314	Aquatic Mammals, Reptiles and Amphibians	1(1+0)

M.F.Sc. courses offered by Department

Sl. No.	Course No.	Course Title	Credit load
Major Courses			
1	FRM 501	Sustainable Fisheries Management	2+1
2	FRM 502	Fish Biodiversity and Conservation Biology	2+1
3	FRM 503	Climate Change and Fisheries Resource	2+1
4	FRM 504	Fish Stock Assessment	2+1
5	FRM 505	Trophodynamics in Aquatic Systems	2+1
6	FRM 506	Reproductive Biology of Finfish and Shellfish	2+1

7	FRM 507	Developmental Biology of Finfish and Shellfish	1+1
8	FRM 508	Modern Techniques in Fisheries Biology	2+1
9	FRM 511	Marine Fisheries Resources Management	2+1
10	FRM 513	Fish Histology and Histochemistry	1+1
Minor Courses			
1	FRM 509	Bio Systematics of Aquatic Fauna	1+2
2	FRM 510	Inland Fisheries Resources Management	2+1
3	FRM 512	Advanced Fish Anatomy and Physiology	2+1
4	FRM 514	Field techniques in Fisheries Resource Management	0+2

Ph.D. courses offered by Department

Sl. No.	Course No.	Course Title	Credit load
Major Courses			12 Credits
1	FRM 601	Fisheries Resource Conservation and Restoration	2+1
2	FRM 602	Assessment of Aquatic Biodiversity and Ecosystem	2+1
3	FRM 603	Functional Physiology of Fishes	2+1
4	FRM 604	GIS Use in Fisheries Resources	2+1
Minor Courses			6 Credits
5	FRM 605	Fisheries Legislation, Governance and Treaties	1+1
6	FRM 606	Software Applications in Fish Stock Assessment	1+1
7	FRM 607	Coral Reef Management	1+1
Supporting Courses			
Doctoral Seminars			2 Credits
1	FRM 691	Doctoral Seminar-I	0+1
2	FRM 692	Doctoral Seminar-I	0+1
Doctoral Research			75 Credits
1	FRM 699	Doctoral Research (II Semester)	0+15
2	FRM 699	Doctoral Research (III Semester)	0+15
3	FRM 699	Doctoral Research (IV Semester)	0+15
4	FRM 699	Doctoral Research (V Semester)	0+15
5	FRM 699	Doctoral Research (VI Semester)	0+15

STUDENT STRENGTH

M.F.Sc. Students Enrolled		M.F.Sc. Degree Awarded	Ph.D. Students Enrolled
Academic Year	Number of Students	Number of Students	Number of Students
2019-20	02	-	-
2020-21	01	01	-
2021-22	02	02	-
2022-23	04	02	-
2023-24	07	-	02
Total:	15	05	02

RESEARCH PROJECTS

The research activities in the department are done either through research project or through the regular research work of the Masters and Ph.D. students.

Ongoing and Accepted Research Projects

Sl. No.	Title of the Projects	Funding Agency	Amount (In Lakhs)	Period
1.	Strengthening and Modernization of Instructional Fish Farm at College of Fisheries, A.N.D.U.A.&T., Kumarganj, Ayodhya	RKVY	337.80	2021-2023
2.	Species validation, breeding, growth and nutritional perspectives of the catfish <i>Clarias magur</i> for diversification of aquaculture in Eastern Uttar Pradesh.	UPCAR (Accepted)	50.00 Lac	2023-24

Research topics of Masters Research

Sl. No.	Name	Research Topics
1.	Durgesh Kumar Verma	Comparison and evaluation of somatic and gonadal development in <i>Labeo rohita</i> under captive and natural condition in Eastern Part of Uttar Pradesh.
2.	Ravi Kumar	Comparison and evaluation of somatic and gonadal development in <i>Catla catla</i> captive and natural condition in Eastern Part of Uttar Pradesh.
3.	Shubham Kanaujiya	Comparison and evaluation of gonadal and somatic development in <i>Labeo rohita</i> under manipulation feeding conditions
4.	Himanshu	Observation of fish biodiversity and gonadal development of selected commercially important fishes in Gomti River”
5.	Khoob Singh	Study of planktonic biodiversity in pond culture under sodic soil condition

INFRASTRUCTURE

PG Classroom

- There are two PG class rooms for teaching the M.F.Sc and Ph.D. students.

Laboratories

- There are two laboratories facilitating both teaching and research programmes.

Central Instrumentation Facility- 02

Referral Fish Museum

A Referral Fish Museum has about 150 species of various aquatic organisms such as finfishes, shellfishes, corals, sponges, seaweeds etc. is maintained by the department. The specimens are used to teach the UG, PG and Ph.D. students. In addition, the trainees and farmers who visit the museum are educated on the value of aquatic biodiversity and the need for proper conservation and management of aquatic resources.

EQUIPMENT

Sl.No.	Name of the Equipment	Quantity	Utility / Purpose
1.	Microscope with Image Processing System	1	Used to observe samples
2.	Olympus Microscope	1	Used to observe samples
3.	Water testing kit	1	Used to observe water samples
4.	pH meter	1	Used to observe water pH
5.	Weighing Balance	1	Used to observe samples

EXTENSION ACTIVITIES

Farmer/Public centric Extension activities are carried out by the dept.

- Seed ranching in Adopted village and Gomti river
- Training conducted for the fish farmers

ACHIEVEMENTS

Awards

- Mr. Sunil Kant Verma- **Best Teacher Award-2019** by Agricultural & Environmental Technology Development Society (AETDS)
- Mr. Sunil Kant Verma- **Best Teacher Award-2020-21** by Acharya Narendra Deva University of Agriculture and Technology.
- Dr. Jyoti Saroj, Asstt. Prof. was awarded with “**Best Oral Presentation Award**” in National Conference Organized by COF, Kishanganj Alumni association in collaboration with All India Agricultural Students Association-fisheries chapter at College of fisheries, Kishanganj (BASU), Bihar.
- Dr. Jyoti Saroj, Asstt. Prof. was also awarded with “**Young Women Scientist Award**” in National Conference Organized by COF, Kishanganj Alumni association in collaboration with All India Agricultural Students Association-fisheries chapter at College of fisheries, Kishanganj (BASU), Bihar.

- Dr. Radhakrishnan bagged the **Best Oral Presentation Award** in the International Conference on Fisheries and Expo “Charting Sustainable Horizons: Fisheries, Blue Economy and the Global Goals” conducted at Kochi, Kerala from 12-14 January 2024.
- Dr. Radhakrishnan bagged the **Best Oral Presentation Award** in the International Conference on “Climate Change and Agriculture: Impacts, mitigation and adaptations for sustainable food security and livelihood improvement (ICCA-2024)” conducted at ANDUAT from 1 to 2 March 2024.

PUBLICATIONS

1. S.K. Verma and Shubham Kanaujia, (2022). “Paddy Cum Fish Farming in India: An Innovative Approach to Utilize Water Logged Resources in Sustainable Way” International Journal of Agriculture Science, Volume18, issue 2, June, 2022.
2. S. K. Verma, C. P. Singh, and Dinesh Kumar (2021). “Re-circulatory Aquaculture System” Rastriya Krishi Volume 16, issue 2, pp. 25-27 August, 2022.
3. C. P. Singh, S. K. Verma and Laxmi Prasad (2021), “Bioflock Takniki Dwara Matasya Palan” Rastriya Krishi Volume 16, issue 2, pp. 25-27 August, 2021, pp. 25-27.
4. S. K. Verma and Himashu Singh, (2022). “The Status of Aquaculture in India” Times of Agriculture, issue 26, pp. 126, June, 2022.
5. S. K. Verma, C. P. Singh, P. S. Pramanik, Shubham Kanaujia, Himashu Singh and Khoob Singh (2022). “Meeta Pani Antarsthalia Sansadhano Per Adharit Matasyaki Shetra Mai Navachar” Accepted in Rastriya Krishi Volume 17, issue 1, pp. 25-27 August, 2022.
6. Dinesh Kumar, Laxmi Prasad, S. K. Verma, Sakila Khan and A. P. Rao (2018). “Sheet Ritu Main Matsya Pachhetra Ka Prabandhan. Purvanchal Kheti”. December issue-12. Pp 61-64.
7. S. K. Verma, Dinesh Kumar, Samson Panmayee. (2019). “Jaliya Gunvatta Ka Sangrahit Matsya Paalan me Prabhav”. Rastriya Krishi. Vol. 14 No. 2 Pp. 71-73. (Page No 97 to 99).
8. Laxmi Prasad, Ravi Kumar, Shashank Singh, Dinesh Kumar, Ashish Mouryua, Jag Pal, Sunil Kant Verma and Satendra Kumar (2020). “Adoption of carps-based polyculture system and status of fish productivity in eastern Uttar Pradesh, India 157-161. (Page No 100 to 104). Journal of Entomology and Zoology Studies 2020; 8(3).

9. A. P. Rao, Laxmi Prasad, Dinesh Kumar and S. K. Verma, (2021). “Carp matasya beej uddadan takniki”. Purvanchal kheti Volume 3, March, 2021. Pp 23-26.
10. Munish Kumar, Gyandeep Gupta, Mudeet Saxena, Shashank Singh, Pradeep Kumar, Laxmi Prasad, Sunil Kant Verma, and C. P. Singh, (2023). “Tracer Techniques in Fish Larval Nutrition Studies” Matasya Jagat, Volume 1, Issue 1. Pp 24-28.
11. Shubham Kashyap, Dibyajyoti Sahoo, Yambem Suresh Singh, Arun Bhai Patel, K.V. Radhakrishnan, Prasenjit Pal, Anindya Sundar Barman, Sagar Chandra Mandal, Ratan Kumar Saha, Himanshu Priyadarshi. 2023. Brief restriction endonuclease digestion of genomic DNA improves PCR amplifiability and reproducibility of SSR loci: Augmenting exploration of hidden genetic variability in an endemic carp of South-East Asia. Gene Reports. 32 (2023) 101796.
12. Jyoti, S. and Koya, K.M., 2023. Growth, mortality and recruitment of common dolphinfish *Coryphaena hippurus* (Linnaeus, 1758) along Saurashtra coast of Gujarat, India. Journal of Experimental Zoology, India. 26(2).

FUTURE PLAN:

- Develop Infrastructure including laboratories and equipment.
- Improve academic scenario through interactive teaching-learning.
- Carry out location-specific cutting-edge research on fish diversity of Uttar Pradesh.
- Bring out better strategies for aquatic biodiversity conservation.
- Elucidate strategies for Climate Change Mitigation and Adaptation at the region.
- Actively co-operate in Policy and Governance of the region for ensuring sustainable fisheries and conservation, and socio-economic stability of the region.

Glimpses of the various activities of the Department



PG Class Room



PG Research Lab



Referral Fish Museum



Students conducting Research work



Extension Activities
