

## CURRICULUM VITAE



**Name** : Dr. Mirza Masum Beg

**Mailing Address** : Ramnagar College, P.O.-Ramnagar, Dist-  
Purba Medinipur PIN-721453

**E-mail** : [beg.masum44@gmail.com](mailto:beg.masum44@gmail.com)  
[mbeg@ramnagarcollege.ac.in](mailto:mbeg@ramnagarcollege.ac.in)

**Contact. Number.** : 9476211241/7076189704

**Academic Qualification** : M.Sc. Ph.D.

**Date of Birth** : 03.05.1984

**Date of Joining the college** : 01.08.2015

**Previous Employment, if any** : 1. W.B. Univ. of Animal & Fishery  
Sciences, Kolkata (*Senior Research  
Fellow*)  
2. C.P India Pvt. Ltd (*Marketing Executive*)  
3. Jafala Adarasha Vidyayatan (*Biology  
Teacher*).

**Experience  
(Teaching/Research)** : Teaching: 10 years.  
Research: 7 years.

**Area of Specialization** : Aquaculture /Fisheries Science

**Title of Ph.D. thesis** : “Farming of Indian Major Carps through Organic and Conventional input Management Practices”

**Title of M.Sc. thesis** : “Evaluation of performance of different filter media for optimum operation of trickling filters”

**Areas of Research Interest** :

1. Organic Fish Farming
2. Climate Change in Aquaculture
3. Recirculation Aquaculture System
4. Fish feed formulation
5. Life cycle assessment (LCA)

#### List of publications:

1. **Beg, M. M.,** Roy, S. M., Moulick, S., Mandal, B., Kim, T., & Mal, B. C. (2024). Economic feasibility study of organic and conventional fish farming systems of Indian major carps. *Scientific Reports*, 14(1), 7001. (**Nature portfolio**)
2. **Beg, M. M.,** Roy, S. M., Ramesh, P., Moulick, S., Tiyasha, T., Bhagat, S. K., & Abdelrahman, H. A. (2024). Organic Aquaculture Regulation, Production, and Marketing: Current Status, Issues, and Future Prospects—A Systematic Review. *Aquaculture Research*, 2024(1), 5521188. (**Wiley**)
3. **Beg, M. M.,** Roy, S. M., Moulick, S., & Mandal, B. (2023). Quality evaluation of organically farmed fish fillet of Indian major carps. *Aquaculture International*, 31(5), 2743-2761. (**Spinger Nature**)
4. Das UK, Dubey SK, Chand BK, Trivedi RK, **Beg MM** (2020) Impact of salinity on the Silurid catfishes: a laboratory investigation. *Explor Anim Med Res* 11(1): 119-122. DOI : 10.52635/EAMR/11.1.119-12
5. Das, U. K., Dubey, S. K., Trivedi, R. K., Chand, B. K., & **Beg, M. M.** (2019). Median Lethal Salinity (MLS-5096H) of certain freshwater aquaculture fish species (order: Cypriniformes) from coastal mainland of Sundarban, India.

6. **Beg, M. M.**, Mandal, B., Moulick, S., Mukherjee, C. K., & Mal, B. C. (2016). Efficacy of organic fish farming for sustainability. *International Journal of Advanced Biological Research* 6(2), 180-187.
7. **Beg, M. M.**, Mandal, B., & Moulick, S. (2016). Potential of earthworm meal as a replacement of fish meal for Indian major carps. *International Journal of Fisheries and Aquatic Studies*; 4(3): 357-361.
8. Chand, B. K., Trivedi, R. K., Dubey, S. K., Rout, S. K., **Beg, M. M.**, & Das, U. K. (2015). Effect of salinity on survival and growth of giant freshwater prawn *Macrobrachium rosenbergii* (de Man). *Aquaculture Reports*, 2, 26-33. (Elsevier)
9. Chand, B. K., Dubey, S. K., Trivedi, R. K., **Beg, M. M.**, Das, U. K., & Ghosh, S. K. (2015). Dose optimisation of the synthetic reproductive hormone WOVA-FH for induced breeding of *Clarias batrachus* (Linnaeus, 1758). *Zoology and Ecology*, 25(4), 365-372. (Taylor & Francis)
10. Chand, B. K., R. K. Trivedi, A. Biswas, S. K. Dubey, and **Beg, M. M.** "Study on impact of saline water inundation on freshwater aquaculture in Sundarban using risk analysis tools." *Explor. Anim. Med. Res.* (2012): 170-178. (Print-ISSN 2277-470X/Online-ISSN 2319-247X)
11. Chand, B. K., Trivedi, R. K., Dubey, S. K., & **Beg, M. M.** (2012). Aquaculture in changing climate of Sundarban: survey report on climate change vulnerabilities, aquaculture practices & coping measures in Sagar and Basanti blocks of Indian Sundarban. West Bengal University of Animal & Fishery Sciences, Kolkata, India, 198pp.

### Conference Paper

1. **Beg, M. M.**, Roy, S. M., Kar, A., Mukherjee, C. K., Bhagat, S. K., & Tanveer, M. (2024). Study on recirculating aquaculture system (RAS) in organic fish production. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1391, No. 1, p. 012013). (IOP Publishing).
2. Chand, B. K., R. K. Trivedi, S. Rout, S. K. Ghosh, **M. M. Beg**, U. K. Das, and S. K. Dubey. "Ecosystem based adaptation options against salinity intrusion in freshwater aquaculture system in Sundarban delta of India." (2013): 189-192. *ISAE 2013*. Proceedings of the International Symposium on Agriculture and Environment 2013, 28 November 2013, University of Ruhuna, Sri Lanka

## Book Chapters

1. **Mirza Masum Beg (2022)** Biofloc Technology (BFT): An overview concept. Book Title: Subarnasmreti.  
ISBN: 978-93-94983-10-6
2. **Mirza Masum Beg (2024)** Water quality dynamics in organic and conventional Indian major carps ponds. Book Title: Insight.  
ISBN: 978-81-19675-04-3
3. Subha M. Roy, **Mirza Masum Beg**, and Sanjib Moulick (2024) Sustainable Aquaculture: Enhancing Food Security with Energy Efficiency. Book Title: Food Security, Nutrition and Sustainability Through Aquaculture Technologies. ISBN: 978-3-031-75829-4 (**Spinger Nature**)
4. Subha M. Roy, **Mirza Masum Beg**, and Taeho Kim (2025) Environmental Influence of Aerators in Aquaculture Operation Using a Life Cycle Assessment (LCA) Approach. Book Title: Sustainable Aquaculture: Recent Advances and Techniques. ISBN: 9781779641106 (**Taylor & Francis**)

## Publications: **Books:**

1. Aquaculture in Changing Climate of Sundarban. B K Chand, R K Trivedi, and **M M Beg**, 2012.
2. Fish culture in Changing Climate Condition of Sundarban (Bengali version). B K Chand, R K Trivedi, S K Dubey and **M M Beg**, 2013

## As a Reviewer

Reviewer of Journals

<b>Name of the Journal</b>	<b>Name of the Publisher</b>	<b>National /International</b>	<b>Impact Factor</b>
Journal of Cleaner Production	Elsevier Journals	International	9.8
Journal of Food Composition and Analysis	Elsevier Journals	International	4.0
Ocean Engineering	Elsevier Journals	International	4.6
Future Food	Elsevier Journals	International	7.2
Food Bioscience	Elsevier Journals	International	4.8
Scientific Reports	Nature Portfolio	International	3.8

## Editorial Bord Member:

**Aquaculture International; Spinger Nature**  
**www.spingernature.com**  
**Electronic ISSN: 1573-143X Print ISSN: 0967-612**

**Fellowships** : Senior Research Fellow NICRA Project.

## Involvement in Academic/ Professional organizations:

**1. Involvement in Academic organizations: Internal Examiner of Nataji Open University.**

**2. External Examiner of Agriculture Skill Council of India (ASCI), Govt. of India Ministry of Skill development and Entrepreneurship.**

**3As a resource Person of—Argi –Expo 2017.at Agricultural Food Engineering Department, IIT Kharagpur**

4. As a resource Person of—Argi -Expo-2015 at Agricultural Food Engineering Department, **IIT Kharagpur**.
5. As an Expert of Short-Term Course on —Engineering and Management in Fisheries and Aquaculture-2015 at Agricultural Food Engineering Department, **IIT Kharagpur**.
6. As a resource Person of —Fish Fed Management Practices held on **Hatiasuli Bengal Innovation Foundation & Cooperative Farmers Club**. Vill Hatiasuli, Jhargram.Paschim Medinipur.
7. Resource Person for —Farming of Indian Major Carps held in **Seva-Bharati**, Vill- Kapgari, Jhargram.
8. Resource Person for training on “Climate Resilient Aquaculture for Sundarban” organized by **West Bengal University of Animal and Fishery Sciences**, Kolkata on 7-9th March, 2015 at Bali Island and 20-22nd March at Basanti, Sundarbans, West Bengal.
9. Resource Person for Training on “Climate Resilient Aquaculture for Sundarban” organized by **West Bengal University of Animal and Fishery Sciences**, Kolkata on 6- 8th March, 2014 at Sagar Island, Sundarbans, West Bengal.
10. Resource Person for Certificate course on “Coastal Aquaculture” organized by **Tamralipta Mahavidyalaya**, Tamluk Purba Medinipur on 23- 25th May, 2023 at, West Bengal.

#### **Seminars attended:**

#### **Seminars/workshops attended / Papers presented**

1. Participated in the Orientation Training Programme on “Inland Fisheries Management on 12-18 February, 2019 at ICAR-CIFRI, Brrackpore, Kolkata.
2. Participated in the MHRD Sponsored one day Awareness Program on –NMEICT, jointly organized by NIT Durgapur and Ministry of Higher Education, Govt. of West Bengal on 16<sup>th</sup> February 2018 at Ramnagar College.

3. Participated in one day National Seminar on “Health Risk of Processed Food” on 9<sup>th</sup> March, 2018 at Ramnagar College, Depal, Purba Medinipur.
4. Participated in —Emerging Technologies in Agricultural and Food Engineering. Agricultural and Food Engineering Department, Indian Institute of Technology Kharagpur. 27-30 December, 2016.
5. Participated in National Seminar on “Present Status of Fisheries in West Bengal” on 06<sup>th</sup> to 07<sup>th</sup> December, 2016 at Ramnagar College, Depal, Purba Medinipur.
6. Participated in “Region Specific Models Formulation for Integrated Farming System in West Bengal” **West Bengal University of Animal & Fishery Sciences**, 18 March, 2013.
7. Participated in —Entrepreneurship Development program for Science & Technology (WEBCON), **Govt. Of India**. (23rd November-22nd December, 2006).
8. Attained the seminar on “Aquaculture with Special Emphasis on Mariculture: Problems & Prospects in West Bengal” at **Vidyasagar University**, Midnapore on 26<sup>th</sup> March 2008 to 28<sup>th</sup> March 2008.
9. Participated in the “Matsya Samriddhi mela Programme” on 17<sup>th</sup> March, 2019 at ICAR-CIFRI, Brrackpore, Kolkata.

### **Papers presented:**

- Presented paper on three day International level seminar on
1. “Frontiers of Fisheries Research: Problems and Prospects” on 31<sup>st</sup> January to 1st February, 2019. Organized by Aquaculture Management and Technology, **Vidyasagar University**, Midnapore, 721102, West Bengal, India.
  2. Presented paper on three day International level seminar on “Problems and Prospects of Coastal Aquaculture and Application of Biotechnological Tools for Rural Development” during March 1-3, 2013. Organized by Aquaculture Management and Technology, **Vidyasagar University**, Midnapore, 721102, West Bengal, India.

**Award/Recognition (if any):**

- i. **Awarded 24<sup>th</sup> February 2020- Recognition (ELSEVIER) of the Reviewer- completed reviews - Journal of Cleaner Production**
- ii. **Awarded 16th September 2021- Recognition (ELSEVIER) of the Reviewer- completed reviews - Journal of Ocean Engineering**
- iii. **Awarded 7th December 2021- Recognition (ELSEVIER) of the Reviewer- completed reviews - Journal of Food Composition and Analysis**
- iv. **Awarded 7th December 2021- Recognition (ELSEVIER) of the Reviewer- completed reviews - Journal of Food Composition and Analysis**
- v. **Awarded August 2023- Recognition (ELSEVIER) of the Reviewer- completed reviews – Future Food**
- vi. **As a Senior Research Fellow of W. B. Univ. of Animal & Fishery Sciences, Kolkata- Development of Climate Resilient Aquaculture Strategies for Sagar& Basanti Blocks of Indian Sundarban (Funded by NICRA, ICAR**
- vii. **Short term course on “Aquaculture & Engineering” (Agriculture & Food Engineering Department; I.I.T. Kharagpur, W.B.)**
- viii. **Distinguished speaker- Professional Skill Development Programme (AC&ADP) 20th January-16<sup>th</sup> February, 2020.- W. B. Univ. of Animal & Fishery Sciences, Kolkata**
- ix. **Global Initiative course on “Analysis and Design of Coastal Structure” (Ocean Engg and Naval Architecture; I.I.T. Kharagpur, W.B.)**

**Completed of Detestation work:**

<b>Title of the Dissertations</b>	<b>Specialization</b>	<b>Year of Completion</b>	<b>Students Name</b>	<b>Supervisor</b>
<b>1.</b> Study on Bioflock Technology for Indian Magur ( <i>Clarius batrachus</i> ) in tank culture	Fisheries Science (M.Sc.)	2024	Sourav Kamila	<b>Supervisor</b>
<b>2.</b> Study of Water quality dynamics of <i>Litpenaeus vannamei</i> culture shrimp toilet pond	Fisheries Science (M.Sc.)	2024	Sk Jahedul Rahaman	<b>Supervisor</b>
<b>3.</b> Study of effects on carbohydrate addition methods on pacific white shrimp ( <i>Litpenaeus vannamei</i> ) in pond Culture.	Fisheries Science (M.Sc.)	2024	Sougata Ghorai	<b>Supervisor</b>
<b>4.</b> A study on culture practices on <i>Litpenaeus vannamei</i> in grow out culture pond	Fisheries Science (M.Sc.)	2024	Soma Rani Das	<b>Supervisor</b>
<b>5.</b> Prospects of Aquaponics farming system in aquaculture	Fisheries Science (M.Sc.)	2023	Ito Barman	<b>Supervisor</b>
Study of effects on carbohydrate addition methods on pacific white shrimp ( <i>Litpenaeus vannamei</i> ) in Purba Medinipur, West Bengal	Fisheries Science (M.Sc.)	2023	Suman Klan Tarai	<b>Supervisor</b>
<b>6.</b> Study of White leg shrimp ( <i>Litopenaeus vannamei</i> ) white feces syndrome disease and their treatment methods using plant extract	Fisheries Science (M.Sc.)	2023	Shuvam Bhunia	<b>Supervisor</b>
<b>7.</b> Comparative study of <i>Penaeus vannamei</i> culture between normal and shrimp toilet pond at contain, Purba Medinipur District	Fisheries Science (M.Sc.)	2023	Ranjit Shit	<b>Supervisor</b>

<b>8.</b> Study on ecto-parasite diseases (Argulosis) of Indian Major Carps in Purba Medinipur, West Bengal	Fisheries Science (M.Sc.)	2022	Suman Das	<b>Supervisor</b>
<b>9.</b> A study of Lernaeasis disease on Indian Major Carps in West Bengal	Fisheries Science (M.Sc.)	2022	Asish Barman	<b>Supervisor</b>
<b>10.</b> Effects of different carbon sources on Bioflock Technology and the productivity of <i>Heteroeneustes fossilis</i> culture in tanks	Fisheries Science (M.Sc.)	2022	Ajit kumar Giri	<b>Supervisor</b>
<b>11.</b> Study on Bioflock Technology for <i>Anabas testudineus</i> along with water quality management	Fisheries Science (M.Sc.)	2022	Anup Manna	<b>Supervisor</b>
<b>12.</b> A study on fish market survey and marketing system in Nachinda	Fisheries Science (M.Sc.)	2022	Swarnakamal Patra	<b>Supervisor</b>
<b>13.</b> Effects of Herbal Extracts on White Feces diseases of <i>Litipenaeus vannamei</i> Culture System in Purba Medinipur, West Bengal	Fisheries Science (M.Sc.)	2022	Soumen Kanti Jana	<b>Supervisor</b>
<b>14</b> Shrimp Toilet: A novel way for <i>L. vannamei</i> culture	Fisheries Science (M.F.Sc.)	2020	Pranab kumar Jana	Joint <b>Supervisor</b>
<b>15.</b> Treatment of white feces syndrome (WFS) in shrimp using herbal extract	Fisheries Science (M.F.Sc.)	2020	Arindam Das	Joint <b>Supervisor</b>
<b>16.</b> Effect of dietary protein level on of Mud crab, <i>Scylla serrata</i> , under FRP tanks in West Bengal	Fisheries Science (M.F.Sc.)	2020	Partho Pratim Panja	Joint <b>Supervisor</b>

17. Analysis the growth rate of <i>Litopenaeus vannamei</i> in manmade pond water of West Bengal	Fisheries Science (M.F.Sc.)	2023	Nandan Das	Joint  <b>Supervisor</b>
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**Courses Taught during last 3 years**

Course	Course Title	Level (UG/PG)
FFM	Communication skill & personality development	UG
FFM	Fisheries ecology	UG
FFM	Fish genetics & biotechnology	UG
FFM	Inland capture fisheries& marine fisheries	UG
FFM	Crafts & gears	UG
FFM	Fish seed production and hatchery management	UG
FFM	Fish pathology, microbiology and immunology	UG
FFM	Mariculture	UG
FFM	Information technology & farm accounting	UG
FFM	Fisheries extension	UG
FFM	Aquarium fisheries	UG
FFM	Statistical methods in fisheries	UG
FFM	Fish nutrition & feed technology	UG

Course	Course Title	Level (UG/PG)
FSC-104	Oceanography, Remote sensing & GIS and Disaster	PG
FSC-202	Fish Breeding, Hatchery Design & Management	PG
FSC-302	Aquaculture Engineering and Management	PG
FSC-303	Fish Nutrition & Bioenergetics	PG
Number of Academic Programmers Developed:		
Name of the Academic Programme		Level (UG/PG)
Work shop of Shrimp farming system		(UG/PG)
Certificate Course on Aqua Feed Technicians		(UG/PG)

**Conducting Laboratory Classes During Last 3 years**

Course Code	Course Title	Level (UG/PG)
<b>FFM 2.03</b>	Preparation of wet mounts and dry mounts of fish, Skeletal mounts	UG
<b>FFM 2.03</b>	Anatomy of fish, digestive, nervous, circulatory and reproductive system in type species of fish and prawn.	UG
<b>FFM 2.03</b>	Specific identification of commercial important freshwater and marine fishes, prawn	UG
<b>FFM</b>	Study of structural adaptation for diet variability	UG
<b>FFM</b>	Qualitative and quantitative methods for stomach content	UG
<b>FFM</b>	Gasto- somatic index of fish with different feeding	UG
<b>FFM3.0</b>	Water quality analysis	UG

<b>FFM</b>	Analysis of pond soil quality	UG
<b>FFM</b>	Feed preparation and feeding technique.	UG
<b>FFM</b>	Examination of planktons from culture ponds	UG
<b>FFM</b>	Methods of isolation and culture of bacteria and fungi.	UG
<b>FFM</b>	Examination and identification of common fish parasites.	UG
<b>FFM</b>	Study of normal histology of gills, skin, kidney, and liver	UG
<b>FFM</b>	Identification of cultivable species of oyster's mussels	UG
<b>FFM</b>	Bacteria of public health significance, E.Coli, Botulinum,	UG
<b>5.04 P</b>	staphylococcus, clostridium, V. cholera, Listeria, Salmonella	
<b>FSC-195</b>	Construction of chart regarding study of the phylogenetic tree/evolutionary tree	PG
<b>FSC-195</b>	Study of the feeding behavior, mouth-parts modification and gut content analysis from different fish groups	PG
<b>FSC-195</b>	Biological studies of selected fin fishes and shellfishes from different aquatic resources	PG
<b>FSC-196</b>	Study of the digestive and circulatory systems of common species of fin fishes	PG
<b>FSC-196</b>	Identification of traditional and modern fishing crafts and gears used in different aquatic system of India	PG
<b>FSC-196</b>	Identification of different fouling organisms	PG
<b>FSC-295</b>	Dissection & display of reproductive system (male and female) of fish	PG
<b>FSC-295</b>	Dissection and display of pituitary gland and preparation and preservation of PGE	PG
<b>FSC-295</b>	Preparation of fish fillets	PG

I am developing technology and management for aquatic organism's aquaculture by optimizing the fish physiology, microbiomes, genetics, feed, water quality, technical, and economics aspects to produce efficient, profitable, and environmentally-friendly

**Administrative activities:**

Course Co Coordinator and HOD of Dept. of Fishery and Farm Management, Ramnagar College. on 01.08.15 to continuing

Mirza Masum Beg