



Dr. Bibhudatta Mishra

Technical Officer (T-5)

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| Department | Aquaculture Production & Environment Division |
| Institute/University | Central Institute of Freshwater Aquaculture (Indian Council of Agricultural Research) |
| Address (Office) | Soil Science Section Aquaculture Production & Environment Division Central Institute of Freshwater Aquaculture P.O.- Kausalyaganga, Bhubaneswar-751 002 Orissa, India |
| Address (Residence) | A/E 69, Bhimatangi Housing Board Kapila Prasad, Bhubaneswar |
| Date of Birth | 3 rd May 1968 |
| Sex | Male |
| Tel | |
| Fax | 0674 2465407 |
| Postal Address of the Institution with Tel/ Fax No. and E-mail: | Central Institute of Freshwater Aquaculture P.O.- Kausalyaganga, Bhubaneswar-751 002, Orissa Telephone Nos.- 0674 2465421 (O), 0674 2465446 (O), Fax No. 0674 2465407 E-mail: bhanubibhu@rediffmail.com Website: http://www.cifa.in |

Educational Qualifications

| Sl. No. | Degree/ Diploma | Year | Major field | University/ Institution | Distinction |
|---------|-----------------|------|---------------------------|---|-------------|
| 1. | M. Sc. | 1991 | Chemistry | Sambalpur University, Sambalpur | 1st |
| 2. | Ph. D. | 2001 | Chemistry | Utkal University Bhubaneswar | - |
| 3. | M.B.A. | 2009 | Human Resource Management | Biju Pattanaik University of Technology, Rourkela | - |

Title of Ph. D. Thesis

Studies on treatment effects of Aquaculture practices on sewage characteristics

Additional training in India and abroad

| Training | Institution/ Country | Sponsored by | Duration |
|---|---|--------------|--|
| Computer appreciation and programming (Part time) | Orissa University of Agriculture and Technology, Orissa | - | 17 th June – 18 th August 1992 |
| Computer languages programming (COBOL, BASIC, FORTRAN) and DATA STRUCTURE (Part time) | Orissa University of Agriculture and Technology, Orissa | - | 31 st October, 1992- 15 th March, 1993 |
| Post Graduate Diploma Ecology and Environment (Correspondence) | Indian Institute of Ecology and Environment, New Delhi | - | 1992 - 1994 |
| Hindi Examination Prabodha (Correspondence) | Ministry of Human Resources, Govt. of India | - | November, 2000 RESULT-April, 2001 |

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| Integrated Soil Fertility Management E-Learning Course | Asia Pacific Regional Technology Centre (APRTC), Bangkok, Thailand | | 3 rd November, 2003-12 th December, 2003 |
| Wetland Management I-Learning Course | UNESCO-IHE i-learning course, Netherland | | 1 st September-30 th December, 2005 |
| Hindi Examination Praveen (Correspondence) | Ministry of Human Resources, Govt. of India | | March, 2006 |

| Training Programme | Duration | Year | Institution |
|---|--|------|---|
| Aquatic Microbiology | 17 th - 23 rd May | 1994 | C.I.F.A, Kausalyaganga, Bhubaneswar, Orissa |
| Nutrient Management in Aquaculture | 3 rd - 9 th September | 1996 | C.I.F.A, Kausalyaganga, Bhubaneswar, Orissa |
| Summer school on “Use of Analytical instruments in analysis of soils sample” | 15 th – 24 th June | 1999 | Soil Science Dept., P.A.U., Ludhiana, Punjab |
| Bio- informatics & Statistics in Aquaculture | 16 th - 19 th January | 2001 | C.I.F.A, Kausalyaganga, Bhubaneswar |
| Research Station Management | 1 st - 6 th November | 2004 | International Crops Research Institute for the Semi Arid Tropics, (ICRISAT), Hyderabad, Andhra Pradesh |
| International Training on “Integrated Fish Farming” | 15 th May - 13 th August | 2005 | Asia-Pacific Regional Research and Training Centre, Freshwater Fisheries Research Centre, Wuxi, <i>People’s Republic of China</i> |
| Technical and Administrative Support for Consortia Based Research in Agriculture” | 05 - 14 th October | 2009 | National Institute of Agricultural Extension Management (MANAGE), Hyderabad |

| Professionals experience (only for last 10 years) | | | | |
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| Designation | Pay scale (Rs.) | Nature of work | Institute (Organization) | Period (From - To) |
| Technical Assistant (T-II-3) | Rs. 4500- 7000/- | Research | Central Institute of Freshwater Aquaculture (ICAR), Bhubaneswar | 4 th January, 1999- 31 st December, 2003 |
| Technical Assistant (T-4) | Rs. 5, 500- 8000/- | Research | Central Institute of Freshwater Aquaculture (ICAR), Bhubaneswar | 1 st January, 2004- 4 th January, 2009 |
| Technical Assistant (T-5) | Rs. 9300- 34800/- | Research | Central Institute of Freshwater Aquaculture (ICAR), Bhubaneswar | 5 th January, 2009 onwards |

| Academic achievements (Awards /Special recognitions) | | | | |
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| In-service awards | | | | |
| Name of the Award | Awarding Organization (Place/ Country) | Year | National/ International Institutional/ Professional Society. | Additional Information |
| Best Poster Award | 39 th Annual conference of Association of Microbiologist of India | 1998 | Professional Society | As Team member (Joint award) |
| Young Scientist | Environmental Chemistry | 2002 | Professional Society | Individual Award |
| Bioved Distinguished Service Award | Aquaculture soil & Water Nutrient Management | 2009 | Professional Society | Individual Award |
| Krushak Bandhu Team Award | Odisha Krushak Samaj | 2011 | | Team Award |
| Young Scientist | Bioved Research Society Allhabad | 2012 | Professional Society | Individual Award |

| Area of research | |
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| Specialization and experience (years) in research | <ul style="list-style-type: none"> Management of Pond Environment (Soil and water quality management) and Nutrient Recycling in culture Pond Ecosystem Sewage characteristics, treatment and utilization in aquaculture pond Integrated fish farming with special reference to duck-horticulture-fish-duckweed farming |
| Institute based project | <ul style="list-style-type: none"> Development of sustainable mixed farming system with incorporation of carps, catfishes and freshwater prawn Nutrient budgets in aquaculture Demonstration and experiment on duck-fish integrated farming System (Two pond; 0.1 ha each) Comparative study of duck and goat excreta as inputs in fish polyculture with major and minor carps Farming of freshwater climbing perch, <i>Anabas testudineus</i> (Bloch) and development of technological package Characterization of growth pattern of diversified carp species under monoculture Multispecies farming of major and minor carps for the diversification and production enhancement (2010-2013) Protocol development for production of stunted carp seed and study of their compensatory growth response in culture system (2012-2014). |
| Externally Funded Project | <ul style="list-style-type: none"> Aquaculture as a tool for utilization and treatment of domestic sewage (Ministry of Environment & Forests 1994-1999) Sustainable livelihood improvement through integrated freshwater Aquaculture & livestock development in Mayurbhanj, Keonjhar & Sambalpur district (NAIP project 2009-2014) Carp seed production in model hatchery and rearing for livelihood development of SC/ST communities in selected district of Orissa- DBT project (2009-2012) |

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| <p>Consultancy Project</p> | <ul style="list-style-type: none"> ▪ Freshwater prawn farming in Haryana ▪ Scaling up Aquaculture in WORLP Districts-Phase 2 (2009-2010) |
| <p>Project operated in farmers field to disseminate the proven technology</p> | <p>Livelihood project of NAIP 2008- 2012 (As Co-PI)</p> <p>Operating in three tribal district of Orissa, i.e. Keonjhar, Maurbhanj and Sambal pur</p> |
| <p>Documentary Film for Farmers</p> | <ul style="list-style-type: none"> ▪ Technical support to Video film preparation “CIFA-The Gateway to Freshwater Aquaculture” ▪ Video film preparation “ Guided and contributed to the video programme production shooting of “ Integrated Fish Farming” for Orissa Remote Sensing Application Centre (ORSAC), Dept. of Science & Technology, Govt.of Orissa assigned to M/s Mobiles, BBSR for transmission under GRAMSAT, 2008 ▪ GRAMSAT live telecast interactive programme on the topic ‘Integrated fish farming’ on 26.10.07 organized by Directorate of fisheries, Orissa, Cuttack ▪ Talk on “Bataka o machha palan/ duck fish farming” in Sandhan programme of Yuvavani, All India Radio, Cuttack on 21.7.08 ▪ Kissan Helpline at ATIC, CIFA for online answering of the query of farmers through telephonic conversation from 2004 onwards. ▪ Video film preparation “Recent trends and practices of Aquaculture in Punjab” by Regional Research Centre of CIFA, during December, 1999 (Scientific Associate) presented at the 5th Indian Fisheries Forum 2000. ▪ Video film preparation “Aquaculture sewage treatment plant (ASTP)” at Cuttack by Central Institute of Freshwater Aquaculture, Bhubaneswar. (Associate) |

Publications

Papers in Peer review Journal

1. Sahu, B.B., Sahoo, S.K., Giri, S.S., Das, P.C., **Mishra, B.**, Sahu, A.K., Eknath, A.E. and Jayashankar, P. 2012 Carcass trait of two marketable size classes of *Pangasius pangasius* (Hamilton, 1822) *Journal of Applied Ichthyology* 1-4
2. Das, P.C., Jena, J.K., **Mishra, Bibhudatta** and Pati, Bikash 2012 Impact of aeration on the growth performance of silver barb, *Puntius gonionotus* during fingerling rearing, *Journal of World Aquaculture Society* 43(1):128-134
3. Jena, J.K., Das, P.C, Mitra, Gopa, Patro, Babita, Mahanta, Dipti and **Mishra, B** 2011 Evaluation of growth performance of *Labeo fimbriatus* (Bloch), *L. gonius* (Hamilton) and *Puntius gonionotus* (Bleeker) in polyculture with *Labeo rohita* (Hamilton) during fingerlings rearing at varied densities, *Aquaculture* 319:493-496
4. Das, P.C., Jena, J.K., **Mishra, Bibhudatta** and Sarangi, N. 2011. Impact of varied frequency of nitrogen fertilization on grow-out performance of *Labeo rohita* (Hamilton) *Aquaculture Research* 42(12):1859-1868
5. **Mishra Bibhudatta**, Ayyappan, S., Jena, J.K., Patri, P., Behera P.K., Aravindakshan, P.K and Purushothaman, C.S 2009. Carp polyculture in aquaculture sewage treatment plant and its impact on soil and water characteristics *Indian Journal of Fisheries* 56(4):271-276
6. **Mishra Bibhudatta**, Ayyappan, S. and Rout, S.P. 2007 The fate of heavy metals in aquaculture sewage treatment plant (ASTP) *Asian Journal of Microbiology, Biotechnology & Environmental Sciences* 9(4): 1023-1033
7. **Mishra Bibhudatta**, Kumar Kuldeep, Banja, B.K., Jena, J.K., Sarangi, N. 2007 Fish-cum-duck integrated farming- A case study *Journal of Aquaculture* 15:37-44

Paper in International Presentation

- Mohapatra, B.C., Das, P.C., Chandra, S., **Mishra, Bibhudatta**, Mahanta, Sudeep and Eknath, E.A. 2011 Livelihood development of SC/ST communities in Nayagarh district Odisha, through carp seed production in FRP hatchery and rearing at Asian-Pacific Aquaculture 2011, Kochi, 17-20 Jan, 2011.
- Das, C. Pratap, Jena, K J., **Mishra, Bibhudatta** and Pati K. Bikash 2011 Grow-out monoculture of olive barb *Puntius sarana* (Hamilton) at varied densities. at Asian-Pacific Aquaculture 2011, Kochi, 17-20 Jan, 2011

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| | <ul style="list-style-type: none"> ➤ Jena, J.K., Mitra, G., Patro, B, Mahanta, D., Mishra, B. and Das, P.C., 2009, Outdoor larval rearing of fringe-lipped carp, <i>Labeo fimbriatus</i> (Bloch) with provision of different inputs In: 5th fish & shellfish larviculture symposium, Ghent University, Belgium September 7-10 ➤ Jena, J.K., Das, P.C. and Mishra, Bibhudatta. 2007 Performance of major carps in response to varied input provision during outdoor fingerling rearing. In: The 8th Asian Fisheries Forum, 20-23rd November, Kochi,132 p |
| <p>Invited Lecturer</p> | <ul style="list-style-type: none"> ▪ Mishra Bibhudatta & Kuldeep Kumar <i>Production enhancement through Scientific Integrated fish farming</i> on the occasion of 14th Indian Agricultural Scientists and Farmer's Congress, 18-19th February, 2012 at Allahabad |
| <p>Book Chapter</p> | <ul style="list-style-type: none"> ❖ Kuldeep Kumar and Bibhudatta Mishra, 2011. Integrated Farming, Chapter-19, Handbook of Fisheries and Aquaculture, Second Edition, ICAR, Publication Division. ❖ Mohapatra, B.C., De, H.K., Chandra, S, Mishra, B., Sarkar, B., Majhi, D. and Mahanta, S.K. 2011. Scientific Aquaculture initiative at Nuagaon, Nayagarh District, Orissa: Case study of leading fish farmers: pp63-68, Aquaculture Innovators (Eds Radheshyam, G.S. Saha & H.K. De), Director, CIFA, Bhubaneswar ❖ Adhikari, Suwendu and Mishra, Bibhudatta.2008 Computer based advanced tools for soil-water management in Aquaculture In: Applied Bioinformatics Statistics and Economics in Fisheries Research: pp.217-234 (Eds. A.K.Roy & Niranjana Sarangi) New India Publishing Agency, New Delhi (India) |
| <p>Technical Reports</p> | <ul style="list-style-type: none"> ❖ “<i>Scaling up Aquaculture in WORLP Districts-Phase 2</i>” for the consultancy project (Team member) ❖ “<i>Freshwater prawn farming pilot project in Haryana</i>” for the consultancy project. (Team member) |
| <p>Papers in Proceedings</p> | <ul style="list-style-type: none"> ❖ Singh, Hardial and Mishra, Bibhudatta, 2001. “<i>Punjab mein samanwit machhili palanparek prabhabshali prakash</i>” Proceedings of “<u>Matsya ebom paribesh</u>” published by CIFE, Mumbai,56-62 pp ❖ Ayyappan, S., Jena, J. K., Patri, P., Aravindakshan, P.K., Purushothaman, C. S., Mishra, B. and Behera, P.K. 2002. |

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| | <p>“Sewage treatment through duckweed and fish based aquaculture system- An innovative biological treatment approach with resource recovery” In: manual of National seminar on “<u>Resource recovery based wastewater treatment system</u>” 23-24th January, CIFE, Mumbai, India, 81-99 pp</p> <p>❖ Ayyappan, S., Purushothaman, C.S., Aravindakshan, P.K., Jena, J. K, Patri, P, Mishra, B., Behera, P.K. and Prasad, J. 2002. “Scope for utilizing treated domestic sewage for Aquaculture” In: <u>The Fifth Indian Fisheries Forum Proceedings</u>, Eds. S. Ayyappan, J.K.Jena and M. Mohan Joseph, Published by AFSIB, Mangalore and AoA, Bhubaneswar, India, 53-57pp.</p> |
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Resource person in Summer school/winter school/Refresher course and seminar/ symposium

| Sl. No. | Name of Training Programme/ Agency involved | Contribution/Period/ No. of participants |
|---------|---|--|
| 1 | Carp culture and Integrated fish farming | Lecturer on Integrated Fish Farming 24 th - 29 th August, 1998 |
| 2 | Carp Culture | Lecturer on Integrated Fish Farming 21-25 th September, 1998 |
| 3 | Nutrient Management in Aquaculture | Lecturer on 20 th - 26 th April, 1999 Chemical composition and Nutritive value of Animal wastes used in Aquaculture practices |
| 4 | 82 nd Batch young farmers training class (EXTENSION DEPARTMENT, PAU, Ludhiana) | Lecture on Fish Farming in Punjab 13 th February, 2001 |
| 5 | 86 th Batch Young Farmers training class (Department of Extension Education PAU, Ludhiana) | Lecture on Fish Farming in Punjab 10 th December, 2002 |
| 6 | 87 th Batch young farmers training class (Department of Extension Education PAU, Ludhiana) | Fish & Prawn farming in Punjab with reference to water and soil problem. 1 st March, 2003 |

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| 7 | 4 Uttar Pradesh fisheries Dept. officials and 4 farmers | Exposure of prawn farming in North-Western India (Water & Soil Analysis) 27 th - 2 nd March, 2003 |
| 8 | 12 stake holders of “Water Project” | Practical demonstration of Pond Management, 1-2 nd November, 2004 |
| 9 | Freshwater Aquaculture for participants of Jammu & Kashmir | Field Visit, 1.3.05 |
| 10 | Workshop-cum-training programme “Bioinformatics and statistics in Aquaculture Research” | Lecture on Statistics of Aquaculture Farm facilities and possible scope for ICT application, 7-10 th February, 06 |
| 11 | Recent Advances in Freshwater Aquaculture | 18.1.06 |
| 12 | Entrepreneurship development through commercial Aquaculture | Visit to farm facilities, 6.6.06 |
| 13 | Fish culture for farmer from Bihar | Lecture on Seed rearing 22.9.06 |
| 14 | KVK vocational training on “Removal of unwanted fish from pond (L)” | 18.8.07 |
| 15 | International training programme Carp breeding & culture for the fish farmers of Sri Lanka | Demonstration preparation of nursery pond including eradication of weed fishes, application of lime, manuring, eradication of aquatic insects, stocking and feeding (P) 22.8.07 |
| 16 | Fresh water Aquaculture; OWDM, Bhubaneswar , NR International, CIFA, Bhubaneswar | Demonstration of different aspects of packages practices of pond management for carp (P), 5.11.07 (30) |
| 17 | New initiative in Aquaculture Extension, CIFA, Bhubaneswar | Field visit coordination; 19.11.07 |
| 18 | NFDB-KVK training programme for Bologarh, Begunia & Khurda block of Khurda district on Fish culture-a suitable enterprise for promoting rural livelihood | <ul style="list-style-type: none"> ▪ Coordination of field work/ practical on carp culture & catfish (P) ▪ Field work at integrated farming (P) ▪ Duck-cum-fish culture (L) 14.1.08; 23.1.08 & 14.2.08) & (18.1.08; 29.1.08 & 19.2.08) |

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| 19 | Recent trends in Fresh water Aquaculture | Field visit; 21.2.08 |
| 20 | Freshwater Aquaculture for rural livelihood; (For Farmers of Chhattisgarh) CIFA, Bhubaneswar | <i>Carp seed rearing</i> (L) (hindi); 4.3.08 (38) |
| 21 | Recent trends in Aquaculture & Fisheries Development (For Fisheries official of Govt. of Orissa) UNDP, India; CIFA, Bhubaneswar; Directorate of Fisheries, Govt. of Orissa | Field visit; 17.3.08 (28) |
| 22 | Bioinformatics & Statistics in Aquaculture Research DBT, New Delhi & CIFA, Bhubaneswar | Field visit; 26.3.08 (50) |
| 23 | Techniques of fish seed production and rearing for income generation for women rural youth of Nagpur and Raiguru Basudeipur village | Identification of Aquatic weed 1.1.09 |
| 24 | Freshwater aquaculture | Field visit & Practical, 23-29 April, 2010 |
| 25 | Capacity building among defense personnel through training on freshwater aquaculture | Aquatic weed and their recycling, Integrated Fish farming, practical on pond 19- 21.8.2010 |
| 26 | Women Empowerment through Freshwater Aquaculture | |
| 27 | Freshwater Aquaculture for Livelihood Development | Integrated Fish Farming, 25.4.11 |
| 28 | New Horizons in Aquaculture | Integrated Fish Farming, 31.1.11 |
| 29 | Towards Blue Revolution | Integrated Fish Farming, 24.2.2011 |
| 30 | Capacity building among defense personnel through training on freshwater aquaculture | Pond Management (P) and Aquatic weed and their recycling into pond (L) 15- 16.3.011 |
| 31 | Recent Advances in Freshwater Aquaculture | Management practices of carp fry and fingerlings production, 17.6.011 |
| 32 | Breeding and Hatchery Management of Carps for participants of Meghalaya state | Carp Seed rearing practical & Grow out culture carp, 3-4.8.011 |

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| 33 | Capacity building among defense personnel through training on freshwater fish farming | 10-15 October, 2011, 26 defense personnel |
| 34 | Integrated Fish Farming | Integrated Fish Farming, 5.9.011 |
| 35 | Freshwater aquaculture | Belpara, Bolangir farmers (25) 28-31 January, 2012 |
| 36 | Capacity building through freshwater Aquaculture | Integrated Fish Farming, 22.2.012 |
| 37 | Capacity building through freshwater Aquaculture | 28.3.012, Integrated Fish Farming |
| 38 | Aquaculture practices for resource dependent farmers of Kokrajhar, Assam | 29-30.5.012 Eradication of unwanted fish (P), Liming and eradication of aquatic insects (P) |
| 39 | International Training programme on “Fisheries Administration and Seed Production of Freshwater Fisheries” | 14, November, 2012, Farm Visit |
| 40 | ICT mediated Aquaculture Extension | 27 November, 2012, Field Visit |
| 41 | Pond and Feed Management (Skill Development training programme) by KVK, CIFA & State Department of Fisheries under Employment mission programme, Govt. of Odisha | Integrated Fish Farming for different batches on 29.12.012, , 16.2.012 respectively with 25 farmers in each batch |
| 42 | ATMA Nuapada-KVK training on “Pond and Feed Management in Freshwater aquaculture” | 17.1.012, Integrated Fish Farming |

COURSE COORDINATOR TRAINING PROGRAMME

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| 1 | Freshwater Aquaculture | 23-26 April, 2011 (25 fish farmers) from Belpara, Balangir |
| 2 | Breeding and Hatchery Management of Carps for participants of Meghalaya state | 30.7.011-8.8.011 |
| 3 | Capacity building among defense personnel through training on freshwater aquaculture | Gorkha resettlement training unit, Dehradun, 14-18 March, 2011 (20) |

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| 4 | Capacity building among defense personnel through training on freshwater fish farming | Gorkha resettlement training unit, Dehradun, 10-15 October, 2011 |
| 5 | Freshwater aquaculture | Belpara, Bolangir farmers (25) 28-31 January, 2012 |
| 6 | Capacity building through freshwater Aquaculture | 28.3.012, Integrated Fish Farming |



25 Years of dedicated service to the nation