Bio-data

1. Name and full contact details**:**

Pabitra Banik
Former Professor, Agricultural and Ecological Research Unit (AERU)
Indian Statistical Institute (ISI), Kolkata
203, B. T. Road, Kolkata – 700108
Contact no.: 9433888591 Email: banikpabitra@gmail.com

2. Full work experience:

a. Junior Research Fellow: Indian Statistical Institute, 1989-1991.
b. Senior Research Fellow: Indian Statistical Institute, 1991-1996.
c. Research Associate: Indian Statistical Institute, 1996-1999.

Position held	Unit	Period of appointment	
Lecturer	Agricultural Science Unit, Indian Statistical Institute	April, 1999	November, 2004
Assistant Professor	Agricultural and Ecological Research Unit	December, 2004	March, 2009
Associate Professor	Agricultural and Ecological Research Unit	April, 2009	June, 2014
Professor	Agricultural and Ecological Research Unit	July 01, 2014 (level 14A of CFTI)	31.10.2025

3. Complete list of publications (most recent first):
IF: Scopus Impact Factor (2024/25), Citation data: Google Scholar (2025)
* Corresponding author

Research articles communicated to journals (under review)

Das, Priyanka, Bose, Arup, **Banik, Pabitra*** 2025. Imputation of Missing Rainfall Data in the Indian Sundarbans (under revision)

Parakh, Dishant, Guha Sarkar*, Ratna, Das, Priyanka and **Banik, Pabitra*** 2024. Comparative Evaluation of PET estimates in Sub-tropical Plateau Region.: **Mausam** (revised version communicated)

Research Articles published in journals

1. Mitra, Sreemoyee, Das, Priyanka, Karmakar, Ritabrata, **Banik, Pabitra***, Bose, Arup*. 2025. Effect of Cropping Systems on the Spatial Distribution of Salt-Tolerant Bacteria and other Soil Parameters in the Agricultural Soils of the Indian Sundarbans. **PLOS One**. (Accepted)

2. Mitra, Sreemoyee, Dey, Joyeta, Sarkar, Sutripta, & **Banik, Pabitra**.* 2025. Halotolerant bacteria isolated from soils of Indian mangrove ecosystem for metal removal and NPK enhancement. Scientific Reports, 25: 20804 (https://doi.org/10.1038/s41598-025-07859-0)

3. Majumder, Supriya, **Banik, Pabitra**. 2025. Insights into the comparison of machine learning models on rice grain arsenic prediction: Interplay of rice cultivation systems and soil environmental factors. Environmental Pollution, 381: 126646 (https://doi.org/10.1016/j.envpol.2025.126646)

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5. Das, Susmita, Ghosh, Abhik, Powell, Michael A. and **Banik, Pabitra*.** 2023. Meta-analyses of arsenic accumulation in Indica and Japonica rice grains. **Environmental Science and Pollution Research**. 30: 58827-58840 (**IF: 5.8**) **[Citation: 5]**

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8. Bera, Kartik, Michelle, Newcomer and **Banik Pabitra***. 2022. Groundwater Recharge Site Suitability Analysis through Multi-Influencing Factors (MIF) in West Bengal Dry-Land areas, West Bengal, India. **Acta Geochimica** 41(6): 1030-1048. (**IF: 1.6**) **[Citation: 9]**

9. Bera, Kartik, **Banik Pabitra* and Sarkar Aditi.** 2022**.** Analytic Hierarchy Process **(**AHP) and Geoinformatics based Site suitability analysis for rainwater harvesting structures in dryland. **Journal of Hydrology and Hydrologic Engineering** 11(6): 1-12 pages (**IF: 2.439**)

10. Majumder, Supriya, Powell Michael, A. Powell, Biswas, Pabitra Kumar, **Banik, Pabitra***. 2022. The impact of Arsenic induced stress on soil enzyme activity in different rice agroecosystems. **Environmental Technology & Innovation,** 26(6): 102282, 10.1016/j.eti.2022.102282 (**IF: 7.1**) **[Citation: 22]**

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90. **Banik, P.** and Bagchi, D.K. 1996. Productivity of winter crops after sole rice (*Oryzasativa*), blackgram (*Phaseolus mungo*), groundnut (*Arachishypogaea*) and rice + legume intercropping systems on uplands of Bihar plateau. **Indian Journal of Agricultural Sciences**, 66(4): 208 – 211. (**IF: 0.374**)**[Citation: 5]**

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92. Sarkar, R.K., Chakraborty, A. and **Banik, P.** 1995. Production potential and economic feasibility of oilseed based crop sequences on rainfed upland. **Indian Agriculturist**, 39(4): 239-244.(**IF: 0.374**)**[Citation: 1]**

93. **Banik, P.** and Bagchi, D.K. 1995. Economics of rice (*Oryzasativa* L.) + legume intercropping in uplands of Bihar plateau. **Indian Journal of Dryland Agricultural Research & Development**, 10(1): 55 - 60.

94. Ghosal, P., **Banik, P*.** and Adhikary, S. 1994. Response of wheat to potassium application on lareritic soil of Bihar plateau. **Indian Agriculturist**, 38(3): 207 - 209. (**IF: 0.374**)

95. **Banik, P.** and Bagchi, D.K. 1994. Evaluation of rice (*Oryzasativa*) and legume intercropping in upland situation of Bihar plateau. **Indian Journal of Agricultural Sciences**, 64(4): 364 – 368 (**IF: 0.374**).**[Citation: 33]**

96. **Banik, P.**, Ghosal, P. and Bagchi, D.K. 1993. Production potential, economics and water use efficiency of different crop sequences in Bihar plateau area. **Indian Journal of Dryland Agricultural Research & Development**, 8(2): 119 - 124.**[Citation: 4]**

97. **Banik, P.** and Bagchi, D.K. 1993. Effect of legumes as sole and intercrop on residual soil fertility and succeeding crop in upland situation. **Indian Agriculturist**, 37(2): 69 - 75.(**IF: 0.374**).**[Citation: 15]**

98. **Banik, P.**, Adhikary, S. and Bagchi, D.K. 1992. Varietal option for rapeseed and mustard in Bihar plateau. **Indian Agriculturist**, 36(2) : 95 - 99.(**IF: 0.374**)

99. Sarkar, R.K. and **Banik, P.** 1991. Response of green gram (*Phaseolousradiatus*) to nitrogen, phosphorus and molybdenum. **Indian Journal of Agronomy**, 36(1): 91 - 96.(**IF: 0.223**)**[Citation: 58]**

Discussion Articles

1. Edmonds, Christopher, Fuwa, Nobuhiko and **Banik, Pabitra.** 2006. Poverty Reduction in the 'Tribal Belt' of Eastern India. Asia and Pacific Issues Series No.81, pp 1-12. East West Center, Hawaii, USA.

2. Edmonds, Christopher, Fuwa, Nobuhiko and **Banik, Pabitra**. 2005. How inefficient are small-scale rice farmers in eastern India really? Examining the effects of microtopography on technical efficiency estimates. East-West Center Working Paper No. 79. Honolulu: East-West Center. May 2005. [**Citation: 2**]

3. **Banik, P**, Edmonds, C. Fuwa, N., Kam, S.P., Villano, L. and Bagchi, D.K. 2004. Natural Resource endowments, subsistence agriculture, and poverty in Chhotanagpur plateau. IRRI Discussion Paper Series No. 47, Los Banos, Philippines: International Rice Research Institute, 32 p. [**Citation: 1**]

Popular articles

4. **Banik, P*.**, Chakraborty, A. and Bala, B. 1996. High-intensity cropping with short duration rice crop in Bihar plateau. **Indian Farming**, 45(2): 5-6.

5. **Banik, P*.** 1996. Mushroom: the cheapest source of protein. **Indian Farming**, 45(11) : 28-30.

Articles in Conference Proceedings

6. Bera, K., Newcomer, M. E., **Banik, P.** 2022. Climate Risk Analysis for Water Resources in Dryland Area of West Bengal (No. IAHS2022-157). Copernicus Meetings. IAHS Scientific Assembly 2022 29 May–03 June 2022 Montpellier, France

7. Fuwa, Nobuhiko, Edmonds, Christopher, and **Banik, Pabitra** 2005. How inefficient are small-scale rice farmers in eastern India really? Examining the effects of microtopography on technical efficiency estimates. Paper selected for presentation at the American Agricultural Economics Association Annual Meeting, Providence, Rhode Island, USA, July 24-27, 2005

8. Bagchi, D.K., **Banik, P.** and Sasmal, T. 1995. Selection of appropriate technologies for upland rainfed rice growing on the Bihar plateau, India. (In) Fragile Lives in Fragile Ecosystems. Proceeding Vol. International Rice Research Conference '95, held in IRRI, Los Banos, Philippines during 13 - 17 February 1995, pp. 127 – 134

Book chapters

9. Bera, Kartic; Bandyopadhyay, Jatisankar and **Banik, Pabitra.** 2023. Analytic Hierarchy Process (AHP) application in watershed management plan, a case study of sub-watershed. Book Chapter Analytic Hierarchy Process- Models, Methods, Concepts and Applications. Editor, Fabio De Felice. Publisher: Intech Open. Published: July 12, 2023: 19 pages

10. Edmonds, Christopher, Mehtta, Megnaa, Noy, Ilan, **Banik, Pabitra**. 2021. The Climate-(Ir)resilient Society of the Indian Sundarbans Tropical Cyclones, Sea Level Rise, and Mortality Risk. The Palgrave Handbook of Climate Resilient Societies pp 1-30 (Springer) Editor in Chief, Robert C. Brears

Project Reports

1. **Banik Pabitra,** and Banerjee Asis , K. 2014. Development of information on agricultural and horticultural production and their marketing using RS and GIS in some districts of West Bengal Report of Indian Statistical Institute - West Bengal state council of Science and Technology.

2. **Banik Pabitra** 2012. Effects of Different sources of Water soluble Phosphetic Fertilizers in Eastern plateau area. Report of Indian Statistical Institute - Rastriya Chemicals and Fertilizers Ltd.

3. **Banik, Pabitra**, Bagchi, D.K., Edmonds, Christopher, Fuwa, Nobuhiko, Kam, Suan Pheng, Villano, Lorena. 2004. Sustainability criteria of rice based cropping system in Bihar plateau of eastern India. Report of Indian Statistical Institute-**International Rice Research Institute collaborative Project**.

4. **Banik, P**., Ghosal, P.K. and Bagchi, D.K. 2004. Rice area characterization using GIS and image processing software. TAC/DCSW approved project

4. Bagchi, D.K. and **Banik, P**. 1998. Rice based cropping sequences under different agronomical practices in rainfed Bihar plateau area. Project Report of TAC/DCSW approved project.A separate list up to ten most significant publications (since becoming Professor) along with journal impact factor (Thomson Reuters), SCIMAGO Journal Rank Indicator (Q1/Q2/…), if available, and CORE ranking (A*/A/B/…) for conferences, if available, and number of citations (mentioning the source):

Sl. No	**Publication**	**Impact factor**	**Citation** (Google Scholar)
1.	Majumder, Supriya, **Banik, Pabitra**. **2025.** Insights into the comparison of machine learning models on rice grain arsenic prediction: Interplay of rice cultivation systems and soil environmental factors. Environmental Pollution, 381: 126646 (https://doi.org/10.1016/j.envpol.2025.126646)	**7.3 First quartile (Q1) SCIMAGO SJR: 2.11**	
2.	Das, Susmita, Ghosh, Abhik, Powell, Michael A. and **Banik, Pabitra*. 2023**. Meta-analyses of arsenic accumulation in Indica and Japonica rice grains. **Environmental Science and Pollution Research** https://doi.org/10.1007/s11356-023-26729-4	**5.8 First quartile (Q1) SCIMAGO SJR: 1.006**	**5**
3.	Das, Debabrata, Kumar, Abhishek, **Banik, Pabitra,** Swain, Dillip Kumar. **2022**. Comparative evaluation of changes in soil bio-chemical properties after application of traditional and enriched vermicompost. **Environmental Technology & Innovation**. https://doi.org/10.1016/j.eti.2022.102956.	**7.1 First quartile (Q1) SCIMAGO SJR: 1.433**	**16**
4.	Majumder, S, Powell, MA, Biswas, PK, **Banik**, P*. **2022**. The impact of Arsenic induced stress on soil enzyme activity in different rice agroecosystems. **Environmental Technology & Innovation,** 26(6): 102282, DOI:10.1016/j.eti.2022.102282	**7.1 First quartile (Q1) SCIMAGO SJR: 1.433**	**22**
5.	Majumder, Supriya, Michael, A. Powell, Biswas, Pabitra Kumar and **Banik, Pabitra* 2021**. The role of agronomic factors (rice cultivation practices and soil amendments) on Arsenic fractionation: a strategy to minimise Arsenic uptake by rice, with some observations related to Cadmium. **Catena**, 206.	**5.7 First quartile (Q1) SCIMAGO SJR: 1.472**	**16**

	https://doi.org/10.1016/j.catena.2021.105556		
6.	Majumder, Supriya and **Banik, Pabitra* 2021**. Inhibition of Arsenic transport from soil to rice grain with a sustained field-scale aerobic rice cultural practice. **Journal of Environmental Management.** 279, 111620 https://doi.org/10.1016/j.jenvman.2020.111620.	**8.4 First quartile (Q1) SCIMAGO SJR: 1.994**	**14**
7.	Das, Subhasish, Sarkar, Subhasree, Das, Maneka, **Banik, Pabitra**, Bhattacharya, Satya Sundar **2021**. Influence of soil quality factors on capsaicin biosynthesis, pungency, yield, and produce quality of chilli: An insight on Csy1, Pun1, and Pun12signaling responses. **Plant Physiology and Biochemistry**, 166: 427 436.	**5.7 First quartile (Q1) SCIMAGO SJR: 1.141**	**13**
8.	Majumder, Supriya and **Banik Pabitra* 2019**. Geographical variation of arsenic distribution in paddy soil, rice and rice-based products: A meta-analytic approach and implication to human health. **Journal of Environmental Management**. 233:184-199.	**8.4 First quartile (Q1) SCIMAGO SJR: 1.994**	**89**
9.	Majumder, S., Neogi, S., Dutta, T., Powel, M. A., **Banik, P*. 2019**. The impact of biochar on soil carbon sequestration: meta-analytical approach to evaluating environmental and economic advantages. **Journal of environmental management, 250, 109466.**	**8.4 First quartile (Q1) SCIMAGO SJR: 1.994**	**169**
10.	Das, D, Bhattacharyya, P, Ghosh, BC, **Banik, P*. 2016.** Bioconversion and biodynamics of *Eiseniafoetida* in different organic wastes through microbially enriched vermiconversion technologies **Ecological Engineering** 86, 154-161.	**4.1 First quartile (Q1) SCIMAGO SJR: 1.153**	**77**

5. Details of teaching activities since becoming Professor:

Subject taught	Academic programme	Semester (no. of times)	Year
Biological Science II	**B.Stat**	**2nd Sem (aprox 10 sems)**	**1999-2013**
Agricultural Science	**B.Stat**	**2nd Sem (approx 7 sems.)**	**2014-2022, 2024**
Agricultural Farm management	**PGD ARSMA**	**1st Sem (4 sems)**	**2020-23**
Climate change: Agriculture and Food Security	**PGD ARSMA**	**1st Sem (4 sems)**	**2020-23**
Natural Resource Management	**PGD ARSMA**	**2nd Sem (3 sems)**	**2021-23**

Agricultural Water Management MSc (Agronomy) One Sem 2022-23
Faculty of Agricultural and Rural Development, Narendrapur
Ramakrishna Mission Vivekananda Educational and Research Institute

6. Details of PhD supervision (with the name of Institute/University, Year of award) in entire career and since becoming Professor:

Name	Role	University	Status
Dr. Prabhat Pramanik	Co-supervisor	Visva-Bharati University	Awarded - 2009
Dr. Ravi Chandra Sharma	Sole supervisor	Calcutta University	Awarded - 2012
Since Becoming Professor			
Dr. Aditi Sarkar	Co-supervisor	Jadavpur University	Awarded - 2016
Dr. Debabrata Das	Joint- supervisor	IIT, Kharagpur	Awarded - 2018
Dr. Supriya Majumder	Joint- supervisor	Visva-Bharati University	Awarded -2023
Priyanka Das (UGC Fellow)	Co-supervisor	Utkal University	Submitted
Sreemoyee Mitra	Supervisor	Jadavpur University	Ongoing
Puspita Mookerjee	Co-supervisor	Visva-Bharati University	Ongoing

Post Doc Fellow:

- **Dr. Kartic Bera** (19 June 2017 to 5th September 2022- 7 publications in national and International Journals.

Visiting Scientists:

- **Dr. Ravi Chandra Sharma - 4 months**
- **Dr. Satarupa Dey - 7 months - registered 5 (approx.) Novel Bacteria strains in NCBI**
- **Dr. Susmita Das - 6 months - Published one article in International Reputed Journal**

Details of Interns/Master of Science Students Dissertations/Summer Trainees

Sl. No.	Name of the student	Year/Tenure of the work	Title of the project work	College/University/Institutions
1.	**Triparna Mitra**	**2025 (4 months)**	Effect of salt loving bactarial isolates on the enzymatic activitiesof the soil of Indian Sundarbans	Department of Microbiology, Sister Nivedita University,Kolkata, India
2.	**Samriddhi Mistry**	**2025 (5 months)**	Isolation of antimicrobial compounds from soil-driven fungi of the Indian Sundarbans - Prevention against plant pathogenic fungi *Fusarium fujikuroi*	Department of Microbiology, Central University of Tamil Nadu, Tamil Nadu, India
3.	**Swarupa De**	**2023 (6 months)**	Isolation and characterization of bacteria from arsenic contaminated soil of West Bengal	Department of Applied Microbiology, Vellore Institute of Technology, Vellore (VIT), Tamil Nadu, India
4.	**Ishika Das**	**2023 (6 months**	Characterization of bacterial strains isolated from arsenic contaminated soil of West Bengal	Department of Microbiology, Maulana Abul Kalam Azad University Of Technology (MAKAUT), West Bengal
5.	**Sukrit Jana**	**2023 (6 months)**	Isolation of fungal strains from agricultural soils of Indian Sundarbans: It's preventive effect against plant pathogenic fungi *Fusarium fujikuroi*	Maulana Abul Kalam Azad University Of Technology (MAKAUT), West Bengal
6.	**Arpita Mondal**	**2023 (6 months)**	Isolation of halophilic bacterial Strains from agricultural soil of Indian Sundarbans and their mercury reducing properties	
7.	**Sritoma Jash**	**2022 (6 months)**	Isolation, characterization and identification of arsenic tolerant bacteria from arsenic contaminated soil of Nadia and Burdwan districts	Department of Microbiology, Maulana Abul Kalam Azad University Of Technology (MAKAUT), West Bengal
8.	**Soumyo Basu**	**2022 (6 months)**	Isolation and characterization of bacteria isolated from arsenic contaminated soil	Department of Genetics, Maulana Abul Kalam Azad University Of Technology (MAKAUT), West Bengal
9.	**Joyeta Dey**	**2022 (6 months)**	Isolation of Halotolerant Bacteria from the agricultural soil of Sagar Island, Sundarbans: Application in Lead Degradation	Maulana Abul Kalam Azad University Of Technology (MAKAUT), West Bengal
10.	**Adrish Dutta**	**2021 (5 months, approx)**	Isolation of halophilic bacteria from non-rice crops from the soils of Indian Sundarbans	KIIT School Of Biotechnology, KIIT University, Bhubaneswar, Odisha, India
11.	**Soham Bhattacharya**	**2021 (5 months, approx)**	An approach towards identification and characterization of halophilic bacteria isolated from paddy soil of Sundarban mangrove area in West Bengal, India.	
12.	**Debolina Sarkar**	**2019 (4 months)**	Study of Microbial Status of Coastal Estuarine Soil of Sundarban, West Bengal	Department of Environmental Science, Asutosh College, University of Calcutta
13.	**Ayantika Banerjee**	**2015 (4 months)**	Chemicals and microbial properties of enriched vermicompost on lateritic soil in Eastern India	
14.	**Biplab Pati**	**2015 (6 months)**	Effects of P-solubilizing bacteria on P-availability in vermicomposting process	Department of Bioinformatics, West Bengal University of

			and characterization of PSB genes in *Paenibacillus polymyxa*	Technology (WBUT)
15.	**Sruti**	**2014 (6 months)**	Isolation, Biochemical Characterization And Identification Of Bacteria From Soils Under System Of Rice Intensification (SRI)	Department of Applied Microbiology, Vellore Institute of Technology, Vellore (VIT), Tamil Nadu, India
16.	**Ishita Das**	**2014 (6 months)**	Different Microbial Load Under System Of Rice Intensification (SRI)	
17.	**Tapas Biswas**	**2014 (4 months)**	Spatial distribution pattern of soil moisture and soil chemical properties (A case study of a micro-watershed in Birbhum district).	Vidyasagar University, West Midnapore, India
18.	**Titas Sadhu**	**2014 (4 months)**	Enrichment of vermicompost through chemical rock compounds	Department of Microbiology, West Bengal State University
19.	**Biplab Mandal**	**2012 (4 months)**	Land suitability assessment for potential surface irrigation of river catchment for irrigation development in Kansai watershed, Purulia, West Bengal	Department of Remote sensing and Geographic Information System, Vidyasagar University, West Midnapore, India
20.	**Sujan Satpathy**	**2012 (4 months)**	A comparative study of different interpolation methods for rainfall distribution mapping using remote sensing and GIS technologies in Purulia district	
21.	**Amit Ghosh**	**2011 (4 months)**	Multi-criteria land evaluation approach for crop suitability analysis using GIS and Landuse/Landcover mapping (A case study of a micro-watershed in Purulia district)	Department of Biotechnology, Vidyasagar University, West Midnapore, India
22.	**Tanmay Bera**	**2011 (6 months)**	Effect of integrated nutrient management on different soils of eastern India	Department of Biotechnology, Boston College for Professional Studies, Jiwaji University, Gwalior
23.	**Madhuri Ghosh**	**2011 (6 months)**	Impact of vermicompost and fertilizer application on soil properties	
24.	**Paras Jain**	**2011 (6 months)**	Panchagavya in agriculture: its effect on seed germination, plant growth and soil health	Department of Biotechnology, Shri Ramkrishna College, Satna, M.P., India
25.	**Rumpa Paria**	**2010 (4 months)**	Remote sensing and GIS based ground water evaluation and Agricultural drought assessment in Kangsabati irrigation command area	Department of Remote sensing and Geographic Information System, Vidyasagar University, West Midnapore, India
26.	**Susantha Seth**	**2010 (4 months)**	Change detection of landuse land cover of Jambony block, West Midnapore	
27.	**Sujit Das**	**2009 (4 months)**	Integrated nutrient management on baby corn: nutritional quality aspect	Department of Biotechnology, Vidyasagar University, West Midnapore, India
28.	**Monica Mistry**	**2009 (4 months)**	Natural resource inventory and road network analysis of three blocks of Cooch Behar district, West Bengal, using satellite imagery	Department of Remote sensing and Geographic Information System, Vidyasagar University, West Midnapore, India
29.	**Sandipan Chowdhury**	**2004 (6 months)**	Some microbiological and biochemical aspects of Vermicompost	Department of Molecular Biology and Biotechnology, University of Kalyani, Kalyani, India
30.	**Susmita Sen**	**2003 (4 months)**	Resource mapping of Kashipur block of Purulia district, West Bengal using satellite imagery	Department of Forestry (Economics and Management), Institute of Forest Management, Dehra Dun, India

Hands on Laboratory Techniques:

Sl. No.	Name of the student	Tenure of the work	Title of the project work	College/University
1	**Rakesh Ghosh**	19.09.2022 to 21.10.2022	Isolation of specific bacteria from soils of Indian Sundarbans (techniques)	Guru Nanak Institute of Pharmaceutical Science and Technology, Khardaha, West Bengal
2	**Archita Roy**			
3	**Sutripto Ghosh**			
4	**Anusha Samanta**			
5	**Mita Rani Chanda**			
6	**Aritraa Das**	20.12.2022 to 20.01.2023	Microbial Laboratory Techniques for Halophilic Bacterial Isolation from soil	
7	**Supratik Adhikary**			
8	**Dipshikha Biswas**			
9	**Chaitali Ghosh**			

7. Details of participation in externally funded/consultancy projects (most recent first) as PI/Co-PI in the following format:

Project title	Funding agency	From	To	Approved budget	Amount released till date
Agronomic Field Studies on various Crops with Nano-fertilizers	Rashtriya Chemicals and Fertilizers Ltd.(GOI)(RCFL)	2023	2024	Rs.27.14 Lakhs (tendering)	Reimbursement Basis
Strategies for improvement of livelihood security of the farming community in the Indian Sundarbans under present scenario of climate change	Tokyo International University, Japan	2019	2021	Rs. 2.47 lakhs	Rs. 2.47 lakhs
Effects of Different sources of Water soluble Phosphetic Fertilizers in Eastern plateau area	Rashtriya Chemicals and Fertilizers Ltd.(GOI)	2012	2015	Rs. 7.0 lakhs	Rs. 7.0 lakhs
Development of information on agricultural and horticultural production and their marketing using RS and GIS in some districts of West Bengal	WB DST	2009	2015	Rs. 51 lakhs	~Rs. 51.0 lakhs
Farm household survey (Purulia district) for study of agricultural development and poverty in remote rural villages in eastern India	East-West Center, Honolulu, Hawaii, USA	2006	2010	2700 USD	~2700 USD
Sustainability criteria for rice based cropping system in eastern state	International Rice Research Institute	1999	2006	10000 USD	~10000 USD

of India					

** Two more projects have been submitted for possible funding to RCFL and TIH-Rapoor

8. Details of workshops/conferences, symposia conducted in the institute (Title, duration, number of attendees, funding agency) since becoming Professor:

Title	**Duration**	**Number of attendees**	**Funding agency**
Sustainable Agriculture in Easter plateau area (Organised at ISI Giridih)	2 days (2004)	65	ISI
Climate Change and Disaster Management in Coastal Areas	Feb 4, 2020	30	ISI
Online Workshop on AI based Smart Agriculture for Sustainable Development (in collaboration with CAIML, ISI)	Feb 26-28, 2021	70	Registration fee paid by participants
Out-reach program on Application of Statistics in Agriculture and Ecology	One day 2023	55	In collaboration with Prof. Arup Bose from his J C Bose Grant

9. Details of technology transfer/patents:

i. Developed two indices namely Actual Yield Loss or Gain (AYL) and Intercropping Advantages (IA) to assess the advantages/ disadvantages of Row-Replacement intercropping system more precisely. - *Thousands of researchers are using AYL in their research work.*

ii. Developed Rice-legume cropping systems (Double cropping and Intercropping) for eastern plateau region. *It has become popular among the farmers particularly in eastern plateau region.*

iii. Developed Baby corn based cropping system (Baby corn based cropping sequences and baby corn – legume intercropping systems) for eastern plateau area. *We have tried the baby corn in eastern plateau and it has become popular among the local farmers.*

iv. Developed a formulation of organic supplement (PANCHGAVYA) which has a positive effect on seed germination and soil quality. *A new Organic supplement has been developed to accelerate seed germination.*

v. Modified System of Rice Intensification and tried to propagate it in different villages of Debra Block, West Midnapore. *In 2018, about 1500 farmers of 15 villages of Debra block cultivated rice using our SRI technology. At present thousands of farmers have adopted SRI (Single seedling transplanting) in rice cultivation in the West Midnapore district.*

vi. Introduction of high yielding variety and vermicomposting in Giridih and Bengabad districts of Jharkhand – CharakPatla village, Giridih block; Luppi Naitanr villages, Bengabad block, Giridih, Jharkhand. Worked in 14 villages (~20 farmers / village).

vii. Organizing trials on salt tolerant rice varieties in five seawater inundated villages in Sundarbans, like Kultali of 24 Parganas South

10. Details of keynote/plenary/species lectures delivered since becoming Professor:

i. Banik, P. 2025. **Key note Speaker** in Regional Science and Technology Congress organized by WBDST and Siliguri College, 24-25 January 2025: Application of Artificial Intelligence and Machine Learning for Sustainable Development with special reference to Smart Agriculture.

ii. Banik, P. 2023. **Invited Lecture** in National Symposium on Strategies for Improving Agricultural Productivity and Farmer's income in the context of Climate Change. Organised by Agricultural Association of India and Institute of Agriculture, Calcutta University, 16 - 18 December 2023.

iii. Banik, P. 2023. **Invited Lecture** in an Awareness Program on Waste Management (Swachhta Campaign 3.0) organised by Gani Khan Choudhury Institute of Technology (Under MHRD), Malda 12 October 2023.

iv. Banik, P. 2019. Organic farming with reference to VERMICOMPOST: An efficient means of Waste management. **Plenary lecture** for Two days' seminar on Waste management for Greener and Cleaner Environment organized by Department of **Ecological Studies and International Centre for Ecological Engineering, Kalyani University** 25-26 March 2019.

v. Banik P. 2018. Quality Assurance of Official Statistics: My Experience in Agriculture. Organied by **Department of Planning, Statistics and Programe Monitoring, Govt. of West Bengal.** 12th Statistics Day on 29 June 2018.

vi. Banik, P. 2018. A Paradigm Shift for Agriculture: An Experience of SRI, A Farmers' Technology. **18th Professor P. K. Sen memorial Lecture** organized by **The Agricultural Society of India and Institute of Agricultural Science, Calcutta University,** 27th June 2018.

vii. Banik, P. 2015. A paradigm shifts for agriculture: an experience of SRI, a farmers' technology. National Seminar on Biodiversity Organized by **Assam University, Silchar and Indian Statistical Institute.**

11. Formal National and International Collaborations established (MoU signed, joint projects):

(a) MoU signed: Waseda University Japan. Worked in collaboration with Late Prof. Nobuhiko Fuwa for 10 years and published 4 articles.

(b) MoU signed: Birsa Agricultural University, Kanke, Ranchi, Jharkhand, India.

(c) Collaborative research with Dr. Sung Feng Kam, IRS, International Rice Research Institute, Los Banos, Philippines - Published 3 articles.

(d) Collaborative research with Dr. Christopher Edmonds, Tokyo International University, Japan.- Published 5 articles.

(e) Collaborative work with Prof. NobuHiko Fuwa Tokyo University Japan. Worked together in Debra Block and developed a strong farmers network in 15 villages of Debra Block- Published 5 articles.

(f) Collaborative work with Prof. Sayedur M. Rahaman, Dept of Statistics, Rajsahi University, Bangladesh - Published 2 articles.

(g) Collaborative Research work with Prof. Michael A. Powell, Adjunct Professor, Dept of Renewable Resources University of Alberta, CANADA - Published 5 articles.

(h) Collaborative research with Prof. Ilan Noy, Victoria University of Wellington, New Zealand. Published 1 article.

(i) Collaborative research with Dr. Megnaa Mehtta, Sheffield Institute for International Development, University of Sheffield. - Published 1 article.

12. Contribution to Institute functioning since becoming Professor (for Committees served on, please mention Role: Chairperson/Convener/Member):

Contribution to Institute:

(a) Professor-In-Charge, Biological Sciences Division, 2016 – 2018.

(b) Head: Agricultural and Ecological Research Unit 2019-21.

(c) Member: Council, Indian Statistical Institute, From 2016 – 2018.

(d) Member: Finance Committee, Indian Statistical Institute, From 2016 – 2019.

(e) Member: Academic Council, ISI, from 2001 – 2003; 2012-2014; 2015-till date.

(f) Chairman: Research Fellow Advisory Committee, Biological Sciences Division.

(g) Convener – ISEC Evaluation committee 2017.

(h) Convener – Fact finding committee 2018.

(i) Convener – SSO modification committee (ongoing).

(j) Served as a member of numerous other committees in different capacities:

I. **Faculty promotion committee.**

II. **Officers' promotional committee.**

III. **Chairman of several PLP recruitment committee.**

IV. **Chairman and Member BSD- JRF recruitment committee.**

V. **Admission committee – PGD ASRMA Course ISI, Giridih**

VI. **Member Giridih development committee**.

Contribution to other academic institutions

- External Expert Board of Studies, The Division of Agronomy, School of Agriculture and Rural Development, Ramakrishna Mission Vivekananda Educational and Research Institute, Narendrapur Campus.
- D.Sc. Evaluation committee, External Expert- Alagappa University, Tamil Nadu.
- PhD evaluation committee as External Expert –
- Vidyasagar University; Ph.D. Thesis evaluation.
- Tezpur University; Ph.D. Thesis Evaluation and viva-voce examination.
- BITS, Meshra; Ph.D. Thesis Evaluation and viva-voce examination.
- Burdwan University; Ph.D. Thesis Evaluation and viva-voce examination
- Bidhan Chandra Krishi Visyabidyalay; Ph.D. Evaluation and Viva-voce examination.

Contribution to Government

- Vigilance officer – 30th Apr, 2019 – June 2023.
- Member Advisory Committee, Application of Artificial intelligence in Agriculture, Dept. of Digital Agriculture, Ministry of Agriculture and Farmers' welfare, GoI. 2024 - till date.
- Member Technical Advisory Committee on State Income Accounts For West Bengal. 2023 - till date.
- Member State Level project proposal Screening committee, DST, Govt. of WB 2020.

13. National and International academic/research visits with duration (do not include conference visits):

Name	Duration
International Rice Research Institute, Philippines	1 month, as Collaborator in 1996
International Rice Research Institute, Philippines	1 month, as Collaborator in 1998
International Rice Research Institute, Philippines	1 month, as consultant in 2000
International Rice Research Institute, Bangkok Chapter	5 days in 2004
BRAC, Bangladesh (programme organised in collaboration with Cornell University)	6 days in 2006

14. Any other relevant information since becoming Professor (like citation count, h-index, initiation of new teaching/research programmes etc.)

(a) Citation count (Google Scholar): **4455 (as on Aug. 21, 2025)**.

(b) h index (Google scholar): **31 (as on Aug. 21, 2025).**

(c) i10 index (Google scholar): **57 (as on Aug. 21, 2025)**.

(d) Research Interest Score (Research Gate): 1,952.

(e) Course designed: PGD ASRMA course in ISI, Giridih.

(f) Editorial activities

Editor-in-chief, NASS Journal of Agricultural Sciences (2019-22).

Section Editor: Current Indian Science: Agricultural Science.

Topic editor: Frontiers in Agronomy.

(g) Appointed as Associate Member of CAIML, ISI.

(h) Associated with IDEAS-TIH, ISI.

15. List of three external experts/referees with affiliation and contact details:

Prof. Norman Uphoff (Global expert in System of Rice Intensification)
Professor Emeritus of
Government and International Agriculture
Dept. of Global Development
SRI International Network and Resources Center (SRI-Rice)
Cornell University
email: ntu1@cornell.edu

Prof. Michael A. Powell
Dept. of Renewable Resources
University of Alberta
Edmonton, Canada
e-mail: mpowell@mpowellinternational.com

Prof. Himangshu Pathak
Director General
International Crop Research Institute for the Semi-Arid Tropics (ICRISAT)
e-mail: hpathak.iari@gmail.com