

PERSONAL PROFILE

1. Name of the Teacher : Dr. N.F. Islam
2. Department : Botany
3. Designation : Associate Professor
4. Email id : nislam@rtuassam.ac.in
5. Contact no. : 9854251461
6. Teaching Experience : 17 Years 10 Months (up to 30th April 2026)



Class	Teaching Experience (years)	Topics
UG	17 Years 10 Months	Microbiology & Immunology, Mycology & Phytopathology, Ethnobotany, Reproductive Biology of Angiosperms
PG	1 Years 6 Months	Microbiology & Phytopathology, Indian Knowledge System, Reproductive & Developmental Botany, Cryptogams
PhD Course work	-	-

7. Research area of interest : Plant Science, Environmental Engineering, Applied Microbiology and Biotechnology, Toxicology
8. Google Scholar ID : <https://scholar.google.com/citations?hl=en&user=fY4V4bUAAAAJ>
Vidwan ID : <https://vidwan.inflibnet.ac.in/profile/440478>
Orcid ID : <https://orcid.org/0000-0002-0369-2482>
Scopus ID : <https://www.scopus.com/authid/detail.uri?authorId=57193339017>
Web of Science ID : <https://www.webofscience.com/wos/author/record/AEO-9066-2022>
Research ID : <https://researchid.co/nforidnns>

9. Academic activities:

a. National Seminars/Conferences:

- National Seminar on “ Cutting edge trends in Biological Science”, organized by Goalpara college on 11th Jul 2022.
- Conservation and Sustainable use of *Acquilaria malacensis* Lam. in Assam, Northeast India. Paper presented in National Seminar on Environmental Sensitivity, organized by Kumaun University, Nainital, on 2nd Sep 2019.
- Evaluation of rhizospheric mycoflora of banana plant and bulk soil from different locality of Titabar, In UGC sponsored National Seminar on Biodiversity, Conservation, crisis and sustainable use organized by N.N. Saikia College, Titabar in collaboration with Hologapara Nature's Society, Mariani, from 29-30th Sep 2014.
- Activity of soil microorganisms associated with Kharif rice. Paper presented in National Seminar on Prospects of Biotechnological Applications for Sustainable Agriculture, organized by B.B.K. College, Barpeta, Assam from 30-31st Jan 2012.

- National Seminar on Value Addition to Bioresources of N.E. India, Post Harvest Technology & Cold Chain, held at the Deptt. of Botany, Gauhati University, Guwahati, from 19-21st May 2006 and organized by Dept. of Botany, Gauhati University, Guwahati and Assam Science Technology and Environmental Council.
- Effects of extracts of *Parthenium* & *Xanthium* species on the seed germination of certain crop plants. Paper presented in 50th annual technical session of Assam Science Society & National conference on current trends of research in Science & Technology, organized by Gauhati University, Guwahati from 28-29th Jan 2005.

b. International Seminars/Conferences:

- Synergistic Degradation of Nitro-PAHs by Co-inoculum of Bacillus Strains: Implications for Eco-friendly and Sustainable Remediation. Paper presented in International Seminar on "Interdisciplinary Approaches for a Sustainable World", Organized by CNB College, Bokakhat, Assam in collaboration with Bodoland University, Kokrajhar, Assam, from 6-7th Jan 2025.
- Biosurfactant-based remediation of crude-oil contaminated soil: A promising approach. Paper presented in 8th Asia Conference on Environment and Sustainable Development, sponsored by iNech, iJESD, Yokohoma National University, National Institute of Environmental Studies and Nagasaki University, Sapporo, Japan, from 3-5th Nov 2023.

c. Workshops attended:

- National Workshop on "Online Learning Self-Assessment" organized by North-Eastern Hill University on 24th June 2021.
- Workshop on "implementation of CBCS in the undergraduate program of Dibrugarh University" organized by IQAC, Jorhat Kendriya Mahavidyalaya, in collaboration with CDC, Dibrugarh University on 26th April 2019.
- DBT sponsored workshop on Introductory biotechnology organized by Institutional Biotech hub,, Nandanath Saikia College, Titabar, from 28th to 30th April 2016.
- DBT sponsored workshop on recent trends in biotechnology organized by the Institutional Biotech hub, Nandanath Saikia College, Titabar, on 28th June 2014.
- UGC sponsored workshop on human rights education organized by the Department of Political Science, Nandanath Saikia College, Titabar, on 22nd Oct 2011.
- Two-day zonal level workshop on Hazards-Minimizing Risk, Maximizing Awareness organized by CSIR-NEIST, Jorhat on 19-20th Aug 2010.
- Workshop conducted under Faculty Training & Motivation & Adoption of Schools & Colleges by CSIR labs organized by NEIST, Jorhat on 28-29th Jan 2010.
- One Day Training-cum-Awareness Program on Protection of Plant Varieties & Farmers Rights organized by IPR cell, Assam Agricultural University, Jorhat and sponsored by Protection of Plant Varieties and Farmers Rights Authority. Govt. of India, New Delhi on 25th Mar 2009.
- Workshop on Bioinformatics & its Future Prospects held at Gauhati University, Guwahati on 9th June 2006 and organized by Deptt. of Botany, Gauhati University and DOEACC center Guwahati/Tezpur, Ministry of Comm. & Info. Tech., Govt. of India.
- Workshop on Knowledge & Awareness of HIV/ AIDS among the University students organized by Population Research Centre (PRC), Gauhati University, Guwahati from 6-7th Sep 2005 and sponsored by Assam State AIDS Control Society.'
- Patent Awareness Workshop organized by Department of Zoology, Rajib Gandhi University in collaboration with TIFAC, Department of Science & Technology, New Delhi, on Oct 16, 2000.

d. Training courses /seminars/ conferences/ workshops organized:

- Organized one week Faculty Improvement Program on 'Biobased Technology for Green Application' for faculty members, researchers from universities, colleges, and research institutes across the country & abroad, with 21 nos. of National & International experts/resource persons, from 4th -10th March, 2024

- Organized 2 days hands-on-training program on Microbial Fuel Cell (MFC) for sustainable remediation of wastewater, for undergraduate students of host institute and nearby institutes from 12-13th December 2023
- Organized 2 days hands-on-training program on Isolation and screening of beneficial microbe's from rhizosphere soil using culture-based approach for undergraduate students of host institute and nearby institutes from 11-12th September 2023
- Organized 5 days workshop on Technology for Quality Manure Production at Na-Shyam Gaon, Titabar, Assam, from 25-29th May 2023.
- International Webinar on "World Soil Day" jointly organized by Department of Botany, NN Saikia College, Department of Botany, Dhemaji College in association with Common Microbial Biotechnology Platform, Hanoi, Vietnam, held on 5th December 2022.
- One week International workshop on "Academic Research Writing, Copyright & Plagiarism" organized by NN Saikia college teachers unit in collaboration with Department of Botany, NN Saikia College from 14-19th November 2022.
- One week virtual workshop on "Trends in Teaching-Learning Institution Building and Innovations at Higher Educational Institutions" from 22-27th June 2021.
- Workshop on Copyright and Plagiarism on 30th November 2019.
- One-week Faculty Development Programme on "Use of ICT tools for Classroom Teaching" organized by Electronics & ICT Academy IIT Guwahati in association with NN Saikia College, Titabar, held from 22-27th April 2019.
- Workshop on Competence Building for Non-Teaching Staff, organized by IQAC in association with College Employees Association, NN Saikia College on 26th March 2018.
- The "Plant nutrition and disease management" seminar was organized by the Department of Botany, NN Saikia College on 22nd September 2014.
- Organized Seminar on "Rice production and its related problems" held at N.N. Saikia College on 7th January 2011.

e. Faculty Development Programs:

- 63rd Orientation Course at University of Hyderabad from Feb 17th to Mar 16th, 2010, organized by UGC-ASC, University of Hyderabad.
- Refresher Course in Botany at H.P. University, Shimla, From Apr 28th to May 18th, 2011, organized by UGC-ASC, H.P. University, Shimla.
- Special Winter School at Mizoram University, Mizoram, From Nov 22nd to Dec 12th, 2013, organized by UGC-HRDC, Mizoram University, Mizoram.
- UGC sponsored Short term Course on climate change, at Kumaun University from Aug 29th to Sep 4th, 2019, organized by UGC-HRDC, Kumaun University, Nainital.
- One week Faculty Development Program on "Achieving Sustainable Development Goals through Conceptual mode of education" from Sep 14th to Sep 19th, 2020" organized by IQAC-Ch. S.D. St. Theresa's College for Women, Eluru.
- One week Faculty Development Program on "Academic Research Writing" from 25th to 30th April 2022, , organized by Goalpara College.
- Ten-day Faculty Development Program on " Advanced Research Methodology", from 30th May to 9th June 2022, organized by Department of Business Management, RBVRR Women's College, Hyderabad.
- UGC sponsored Short term Course at Kumaun University on 'Research Methodology' from 30th November to 6th December 2023, organized by UGC-HRDC, Kumaun University, Nainital.
- Three-day Faculty Improvement Programme on 'Climate change, Biodiversity & Role of Biotechnology' from 20th March to 22nd March, organized by DKD College, Dergaon
- Twelve-day NEP 2020 Orientation & Sensitization Programme, organized UGC-MMTC, Burdwan University, from 17th May to 28th May 2024.
- Five-day Management Development Programme (MDP) - "Nurturing Future Leadership Programme (NFLP)" under the aegis of MMTP, Ministry of Education organized by SPJIMR Mumbai Campus from 01-05 December, 2025.

f. Details of publications in UGC recognized/Peer reviewed/Scopus Indexed journals:

- Electrochemical sensor technologies for early detection of food allergens and spoilage: Advancing food safety and security. *Next Research* (Elsevier), 9, 101677, 2026, <https://doi.org/10.1016/j.nexres.2026.101677>
- Spinel ferrite nanoparticles: Multifaceted applications and future perspectives in biomedical and environmental sciences. *Next Research* (Elsevier), 5, 101364, 2026, <https://doi.org/10.1016/j.nexres.2026.101364>
- Microbial dehalogenation of halogenated organic pollutants: a review. *Environmental Chemistry Letters* (Springer), 24,101-137, 2025, **IF:20.4**. <https://doi.org/10.1007/s10311-025-01880-1>
- Synergistic approaches in halophyte-microbe interactions: mitigating soil salinity and industrial contaminants for sustainable agriculture. *Discover Life* (Springer), 55(1), 11, 2025, <https://doi.org/10.1007/s11084-025-09688-3>
- Biodegradation of nitro-PAHs by multi-trait PGPR strains isolated directly from rhizosphere soil. *The Microbe* (Elsevier), 6, 100263, 2025, <https://doi.org/10.1016/j.microb.2025.100263>
- Encouraging circular economy and sustainable environmental practices by addressing waste management and biomass energy production. *Regional Sustainability* (Elsevier), 5(4), 100174, 2024, **IF:4.6**. <https://doi.org/10.1016/j.regsus.2024.100174>
- Frankia-actinorhizal symbiosis: a non-chemical biological assemblage for enhanced plant growth, nodulation and reclamation of degraded soils. *Symbiosis* (Springer), 92(1), 1–26, 2024, **IF:2.0**. <https://doi.org/10.1007/s13199-023-00956-2>
- Acceptorless Dehydrogenation of Primary and Secondary Alcohols Catalysed by Phosphine-free C, C Chelated Ir (III) NHC Complexes. *ChemistrySelect* (Wiley), 9(11), 2024, **IF:2.0**. <https://doi.org/10.1002/slct.202304134>
- Synthesis and antagonistic evaluation of fluorinated imidazolium salt [1-(2,6-diisopropylphenyl)-3-(2-fluoro-benzyl)-1H-imidazol-3-ium bromide] against significant phytopathogens in agriculture. *Journal of Fluorine Chemistry* (Elsevier), 274, 110259, 2024, **IF:1.9**. <https://doi.org/10.1016/j.jfluchem.2024.110259>
- Development of FRET-based optical sensors using N-doped carbon dots for detection of chromium (VI) and manganese (VII) in water for a sustainable future. *Journal of Environmental Chemical Engineering* (Elsevier), 12(1), 111721, 2024, **IF:7.2**. <https://doi.org/10.1016/j.jece.2023.111721>
- Converting food waste to biofuel: A sustainable energy solution for Sub-Saharan Africa. *Sustainable Chemistry for the Environment* (Elsevier), 7, 100126, 2024, <https://doi.org/10.1016/j.scenv.2024.100126>
- Exploring eco-friendly approaches for mitigating pharmaceutical and personal care products in aquatic ecosystems: A sustainability assessment. *Chemosphere* (Elsevier), 316, 137715, 2023, **CS:18.1**. <https://doi.org/10.1016/j.chemosphere.2022.137715>
- Soil treatment using a biosurfactant producing bacterial consortium in rice fields contaminated with oily sludge— a sustainable approach. *Environmental Research* (Elsevier), 220, 115092, 2023, **IF:7.7**. <https://doi.org/10.1016/j.envres.2022.115092>
- Enhancing secondary metabolites and alleviating environmental stress in crops with mycogenic nanoparticles: A comprehensive review. *Biocatalysis and Agricultural Biotechnology* (Elsevier), 52, 102805, 2023, **IF:3.8**. <https://doi.org/10.1016/j.bcab.2023.102805>
- The chemical diversity of *Rhynchosylis retusa* (L.) bl.'nectar'-An orchid of economic importance. *Towards Excellence* (UGC-MMTC Gujarat University), 15(1), 235-244, 2023, <https://hrdc.gujaratuniversity.ac.in/Publication/article?id=12394>
- Fungi-derived agriculturally important nanoparticles and their application in crop stress management-Prospects and environmental risks. *Environmental Research* (Elsevier), 212, 113543, 2022, **IF:7.7**. <https://doi.org/10.1016/j.envres.2022.113543>
- Biosurfactant-assisted phytoremediation of potentially toxic elements in soil: Green technology for meeting the United Nations Sustainable Development Goals. *Pedosphere* (Elsevier), 32(1), 198–210, 2022, **IF:7.3**. [https://doi.org/10.1016/S1002-0160\(21\)60067-X](https://doi.org/10.1016/S1002-0160(21)60067-X)
- Enhancing phytoremediation of hazardous metal (loid) s using genome engineering CRISPR–Cas9 technology, *Journal of Hazardous Materials* (Elsevier), 414, 125493, 2021, **IF:11.3**. <https://doi.org/10.1016/j.jhazmat.2021.125493>

- Environmental antibiotics and resistance genes as emerging contaminants: Methods of detection and bioremediation, *Current Research in Microbial Sciences (Elsevier)*, 2, 100027, 2021, **IF:5.8**. <https://doi.org/10.1016/j.crmicr.2021.100027>
- Bioprospecting fungal diversity from crude oil infiltrate soil of Assam, India's Northeast. *Tropical Plant Research (Society for Tropical Plant Research)*, 4 (2), 319-329, 2017, <https://doi.org/10.22271/tpr.2017.v4.i2.042>
- Plant-microbial association in petroleum and gas exploration sites in the state of Assam, north-east India-significance for bioremediation, *Environmental Science and Pollution Research (Springer)*, 24 (9), 8744-8758, 2017, **IF:5.8**. <https://doi.org/10.1007/s11356-017-8485-8>
- Depth-wise variation in microbial community composition in crude oil contaminated soil of Assam, Northeast India. *International Journal for Basic Sciences and Social Sciences (Research Foundation for Basic Sciences & Social Sciences)*, 5 (1), 253-261, 2017.
- Localization of polycyclic aromatic hydrocarbons and heavy metals in surface soil of Asia's oldest oil and gas drilling site in Assam, northeast India: Implications for the Bio-economy. *Emerging Contaminants (KeAi publishing)*, 2(3) 119-127, 2016, **IF:6.9**. <https://doi.org/10.1016/j.emcon.2016.05.004>
- Effect of different growth stages on rice crop on soil microbial and enzyme activities. *Tropical Plant Research (Society for Tropical Plant Research)*, 3 (1), 40-47, 2016.
- A comparative analysis of different rhizospheric soil mycoflora in Gibbon wildlife sanctuary and its nearby area, Assam, India. *European Journal of Experimental Biology (Prime Scholars)*, 5 (2), 90-95, 2015, <http://www.pelagiaresearchlibrary.com/>
- Screening of mycota associated with Aijung rice seed and their effects on seed germination and seedling vigour. *Plant Pathology and Quarantine (Mushroom Research Foundation)*, 2, 75-85, 2012, https://plantpathologyquarantine.org/pdf/PPO_2_1_11.pdf
- Study of fungi associated with the decomposition of rice stubble and their role in the degradation of lignin and holocellulose. *Mycosphere (Mushroom Research Foundation)*, 2 (6), 627-635, 2011, **IF:15.1**. <https://doi.org/10.5943/mycosphere/2/6/3>
- Studies on the influence of root systems of Parthenium plant on soil fungi in different localities of Guwahati, Assam. *Journal of Mycopathological Research (Indian Mycological Society)*, 45 (1), 40-44, 2007.
- Few plants & animals-based folk medicines from Dibrugarh district, Assam. *Indian Journal of Traditional Knowledge, (NIScPR)*, 4(1): 81-85, 2005, **IF:0.7**. <http://nopr.niscpr.res.in/handle/123456789/8488>
- Ethnomedicinal plants from Dibrugarh district, Assam. *Environmental Biology and Conservation, (International Society for Conservation of Natural Resources)*, 10, 19-21, 2005.
- Study of distribution of VAM fungi in Dibrugarh district, Assam. *Plant Archive*, 4(2): 347-350, 2004

g. Publication of Chapter(s) in Books:

- B. Gogoi, N.F. Islam, and H. Sarma. Microbes are the natural ecological engineers in the forest ecosystem, enhancing the interaction between plants and herbivores; Sarma (Ed)- In *Biotechnology of Emerging Microbes*; Elsevier, (2024), pp.163-187. ISBN: 9780443153976, <https://doi.org/10.1016/B978-0-443-15397-6.00011-5>
- S. Ghahari, S. Ghahari, S. Ghahari, G. Ali Nematzadeh, R. R. Saikia, N. F. Islam, H. Sarma. Assisted and amended technology for the sustainable remediation of emerging contaminants, Editor(s): Hemen Sarma, Delfina C. Dominguez, Wen-Yee Lee, *Emerging Contaminants in the Environment, Challenges and Sustainable Practices*; Elsevier,(2022), pp.547-577. ISBN: 9780323851602, <https://doi.org/10.1016/C2020-0-02013-X>
- N.F. Islam, R. Patowary, H. Sarma. Biosurfactant-assisted phytoremediation for a sustainable future, Editor(s): Vimal Pandey, *Assisted Phytoremediation*, Elsevier, (2022), pp.399-414. ISBN: 9780128228937, <https://doi.org/10.1016/C2019-0-04894-7>
- N. F. Islam, H. Sarma. Metagenomics Approach for Selection of Biosurfactant Producing Bacteria from Oil Contaminated Soil: An insight into its technology. In: H. Sarma, MNV Prasad (Eds.), *Biosurfactants for a Sustainable Future: Production and Applications in the Environment and Biomedicine*, Wiley online library, (2021), pp. 43-58. ISBN: 9781119671008, <https://doi.org/10.1002/9781119671022>

- N. F. Islam, H. Sarma and M.N.V. Emerging disinfection by-products in water: novel biofiltration techniques. In: MNV Prasad (Ed), Disinfection Byproducts [DBP] In Water: Detection and Treatment', Elsevier, Amsterdam (2020), pp. 109-135. ISBN: 89780081029770, <https://doi.org/10.1016/B978-0-08-102977-0.00005-6>
- Sharma D., Sarma H., Hazarika S., Islam N.F., Prasad M.N.V. Agro-Ecosystem Diversity in Petroleum and Natural Gas Explored Sites in Assam State, North-Eastern India: Socio-Economic Perspectives. In: Lichtfouse E. (eds). Sustainable Agriculture Reviews, vol 27. Springer, Cham (2018). ISBN: 978-3-319-75190-0, <https://doi.org/10.1002/9781119671022>

h. Patents :

Name of the Patent	Patent Number	Date of Grant	Granting authority
Plant-microbe assisted, and biochar amended sustainable methods for stabilization of polyaromatic hydrocarbon and heavy metals	554169	11/12/2024	Controller of Patents, Govt of India

i. Research Projects completed :

Principal Investigator/ Co-Investigator (s) and Department (s)	Title of the project	Funding Agency	Duration	Amount(Rs.)
Co-Investigator	Development of Plant-microbe consortia for removal of heavy metals and Polycyclic Aromatic Hydrocarbons (PAHs) contaminated soil of Assam	Department of Biotechnology, Govt. of India	Three	43.19 lakhs
Principal Investigator	Screening of ligninolytic fungi for degradation of Polycyclic Aromatic Hydrocarbons (PAHs) from contaminated soil of Assam	University Grant Commission	Two	3.4 lakhs
Principal Investigator	DBT-NER Institutional Biotech Hub, Assam(Phase-II)" under DBT's NER Biotech Hub Programme (under continuation)	Department of Biotechnology, Govt. of India	Three	31.55 lakhs

j. Number of citations received: 1185

k. h-index: 16

i10 index: 19

1. Awards/ Fellowship/ Membership/ Recognition at State/ National/ International level from Government/ Recognized bodies

- Awarded Gold Medal for standing first-class-first in M.Sc. Final exam 2001.
- Received recognition for COVID-19: Operational Planning Guidelines and COVID-19 Partners Platform to support country preparedness and response from World Health Organization on 7th April 2020
- Invited lectures for Post Graduate classes at Department of Botany, Bodoland University
- Nodal officer for All India Survey on Higher Education, 2010-2024.
- Nodal officer, Swachh Bharat Summer Internship Program

- Reviewer, Athens Journal of Sciences, Athens Institute for Education and Research, A World Association of Academics and Researchers, Athens, Greece.
- Reviewer, Tropical Plant Research, An International Journal by Society for Tropical Plant Research.
- Reviewer, International Journal of Environment and Climate Change, London
- Reviewer, Achieves of Microbiology, Springer Nature
- Reviewer, npj Materials Sustainability, Springer Nature
- Reviewer, Environmental Processes, Springer Nature
- Review Editor, Frontiers in Microbiology, Switzerland
- Affiliate Member, Microbiology Society (member ID: C043098), London
- Affiliated Member (member ID: SASM2249, South African Society for Microbiology (SASM)
- Associate Member (member ID:100487), Society for Conservation Biology (SCB), Washington, D.C.
- Member (member ID:82241572), Society for Ecological Restoration, Washington, D.C.
- Member, Society of Ethnobiology (member ID:6411), Boston
- Member, International Society of Ethnobiology, Gainesville
- Member (member ID:200553522), American Society for Microbiology (ASM)
- Member (member ID:40107592), American Society of Plant Biologists (ASPB)
- Member (member ID:719298), Botanical Society of Scotland
- Member, Assam Science Society
- Member, Botanical Society of Assam
- Fellow of Linnean Society of London (FLS) (member ID:19130)

m. *Abroad visit:*

- 8th Asia Conference on Environment and Sustainable Development, sponsored by iNech, iJESD, Yokohoma National University, National Institute of Environmental Studies and Nagasaki University, Sapporo, Japan, from 3-5th Nov 2023.



Signature of Teacher