Kamrun Nahar, PhD
Professor, Department of Environmental Science and Management,719 South
Administration Building (SAC), North South University
Dhaka, Bangladesh. 1229

Plot#15, Block B, Bashundhara. +880.1711155307 (Cell), +880.2.55668200-Ext. 2054 (Off). nahar.kamrun@northsouth.edu,

SUMMARY OF QUALIFICATIONS

Agronomist and researcher, specializing in Crop physiology and sustainable feedstock production from nonfood and drought resistant energy crops to produce biofuels and usable byproducts by chemical processes. 25 years of teaching and research experience in the field, greenhouse, hydroponic, laboratory and tissue culture techniques. Published research articles in peer reviewed academic and scientific, national and international journals and books. Experience in scientific research, secured funding as Principal Investigator on University-level research. Research interests include: Soil-water-plant relations, Renewable energy (bio-fuel), Climate change (adaptation and mitigation),Waste water treatment, Ecology, Plant biotechnology and Phytoremediation.

EDUCATION

Doctor of Philosophy (PhD) Major: Agronomy
Department of Applied Plant Sciences and Plant Biotechnology, University of Natural Resources & Life Sciences (Universität für Bodenkultur), Austria**,**2000
Dissertation Topic: Effect of Water Stress on Nutrient Uptake, Osmotic Adjustment and Root Development of Different Tomato Cultivars under Subtropical Condition

Master of Science (MS), Soil Chemistry
Department of Soil, Water and Environment, University of Dhaka, Bangladesh1982 — GPA: 4.0/4.0 (1st Class)
Dissertation Topic: Salinity of Bangladesh Soils

Bachelor of Science (B.Sc. Hons), Soil Science — GPA: 4.0/4.0 (Ist Class)
Department of Soil, Water and Environment, University of Dhaka, Bangladesh 1981

Certification and Training:

Certified DWA (German Associations for Water, Waste water and Waste) Trainer in Water Sector GIZ (*Deutsche Gesellschaft für Internationale Zusammenarbeit*) German Development Cooperation

Certified trainer of Effluent Treatment in Textile Production
United Nations Industrial Development Organization (UNIDO)

Awards and Honors:
ÖAD Osterreichisher Austauschdienst (1997-2000) Austrian Academic Exchange Award (Doctoral)
Bangladesh Education Board First Class Award (1981) University of Dhaka, Dhaka, Bangladesh

TEACHING EXPERIENCE

09/06-Present	*Professor*, **North South University** Department of Environmental Science and Management (ESM)	Dhaka, Bangladesh
10/03-07/05	*Guest Lecturer*, **BRAC University** Taught courses in Environmental Science	Dhaka, Bangladesh
12/00-05/05	*Assistant Professor*, **Independent University-Bangladesh** School of Environmental Science and Management	Dhaka, Bangladesh
06/93-03/95	*Lecturer*, **Ispahani Public School and College** Agricultural Science and Biology	Comilla, Bangladesh

Course Taught	Soil Science, Ecology, Environmental Biology, Agricultural Science, Agriculture & Land Resource Management, Sustainable Agriculture, Population and Environment, Environmental Health and Sanitation, Sustainable energy resources
	Environmental Management, Forest Management, General Biology, Population Environment and Development Planning, Introduction to Environmental Science

RESEARCH EXPERIENCE

01/24 -01/25	*Principal Investigator,* **North South University** Dhaka, Bangladesh.Funded Project (CTRG): Development of climate resilient rice variety by modulating Helicase gene through genome editing
04/13-08/13	*Visiting Scholar,* **Washington State University** Pullman, WA, USA. Biofuel Cropping Systems (BCS), Nutrient Cycling and Rhizosphere Ecology (NCRE) Research, Department of Crop and Soil Sciences
07/12- 09/13	*Principal Investigator,* **North South University** Dhaka, BangladeshFunded Project: Climate Change Mitigation and Prospect of Biofuel Production from Second Generation Energy Crop Jatropha with Environmental and Socioeconomic Benefits
06/11-01/12	*Senior Researcher,* **University of Dhaka** Dhaka, BangladeshIn vitro propagation of Jatropha and castor plant to produce sustainable feedstock for energy Tissue culture laboratory, Department of Botany
05/09-Present	*Researcher,* **North South University** Dhaka, BangladeshAlternative energy (Biofuel) - Jatropha, Castor oil, Water Hyacinth and other energy crops
08/10-11/10	*Visiting Scholar,* **University of Florida** Immokalee, Florida, USA Worked with Jatropha Curcas at Intelligentsia International, Inc with the Institute of Food and AgriculturalSciences (IFAS-University of Florida) in Hendry County Sustainable Biofuels Center
07/01-07/10	*Researcher,* **Independent University, Dhaka University, North South University** Nationwide, BangladeshWorked with subtropical fruits and vegetables in field and greenhouse settings, laboratory analysis of soil, Plant and waters samples
03/97-08/00	*Research Assistant,* **University of Natural Resources and Life Sciences** Vienna, Austria Research included working with different varieties of tomato on hydroponic systems in the greenhouse
04/95-02/97	*Research Associate,* **University of Dhaka,** Dhaka, Bangladesh. Effect of salt and water stress (drought) in Bangladesh soils on Rabi crops (winter crops - oil seeds and vegetables)

SELECTED PUBLICATIONS

Nahar. K. 2025.Chia Seed (Salvia hispanica L.) biology: A superfood cereal for healthy life - An overview. Journal of Plant biota.4 (1):6-10.

Nahar.K and S. A. Sunny.2024. Co-benefits of Eichhornia crassipes (water hyacinth) as sustainable biomass for biofuel production and aquatic ecosystem phytoremediation. *Fuels*, MDPI, *5*, 317-333.

Nahar. K and Nitu, S. A. 2023. Influence of Seed Cake as Organic Fertilizer on Growth, Dry Matter Production and Root Development of Two Cultivars of C4 Plant, Maize (Zea mays) under Lab Conditions. *International Journal of Plant & Soil Science, 35*(20), 875–886.

Islam, A., Hossain, M.E., Nahar.K and Majed. N. 2023. Assessment of Environmental Hazard and Heavy metal contamination in Dhaleshwari River sediment: A toxicity-based study on pollution. Pollution, 9(1), 67 -83

Nahar. K and Ullah, S. M. 2022. Climate Smart Agriculture with Drought Resistant Tomato (Solanum lycopersicum) Cultivars under Subtropical Climate. *International Journal of Environment and Climate Change*, *12*(12), 138-147.

Nahar. K and S. Hoque 2021. Phytoremediation to improve eutrophic ecosystem by floating aquatic macrophyte, water lettuce (Pistia stratiotes l.) at lab scale. Egyptian Journal of aquatic research, Elsevier, 47 (2): 231-237

Nahar, K. 2020. Azolla (Caroliniana): An Aquatic Energy Crop for Remediation of Eutrophic Ecosystems with Prospect of Biofuel Production in Bangladesh. Asia Pacific Journal of Energy and Environment, 7 (2): 79-86

Nahar, K and S. A. Sunny. 2020. Duckweed based clean energy production dynamics (Ethanol and Biogas) and Phytoremediation potential inBangladesh. Springer nature, Modeling Earth System and Environment. 5(4): 1-11. Doi.org/10.1007/s40808-019-00659-y

Nahar. K and Qafeal Ahsan. 2019. Heavy metal contamination in soil and vegetation from tanning industries in Bangladesh. European journal ofPharmaceutical and Medical research. 6(6):453-462. DOI: 10.20959/ejpmr20196-6564

Nahar. K and W.L.Pan. 2018. High resolution in situ rhizosphere imaging of root growth dynamics in oilseed castor plant (Ricinus communis L.)using digital scanners. Springer, Modeling Earth Systems and Environment. https://doi.org/10.1007/s40808-018-0564-4

Nahar. K and S.M Ullah, 2018. Drought Stress Effects on Plant Water Relations, Growth, Fruit Quality and Osmotic Adjustment of Tomato (Solanumlycopersicum) under Subtropical Condition. Asian journal of agriculture and horticultural research. 1(2): 1-14

Nahar. K and R.S. Borna. 2018. Jatropha curcas L. and Ricinus communis L : In vitro Plant Propagation from Shoot Tip Explants for CommercialCultivation and Biofuel Production. Asian Journal of Biotechnology and Bioresource Technology. 2(3):1- 8

Nahar. K and S.M Ullah. 2017. Fruit quality and osmotic adjustment of four tomato cultivars under drought stress. Asian journal of soil and plantnutrition. 2(1):1-8

Nahar. K and S. A. Sunny. 2016. Bio-diesel, Glycerin and Seed Cake production from roof-top gardening of Jatropha curcas L. *CurrentEnvironmental Engineering*, 3 (1): 18-31

Nahar. K and W.L.Pan. 2015. Urea fertilization: Effects on Growth, Nutrient uptake and Root Development of the Biodiesel Plant (Ricinuscommunis). American Journal of Experimental Agriculture. 5(4): 320 - 335

Nahar.K and S. A. Sunny, 2014. Jatropha curcas L: A Sustainable Feedstock for the Production of Bioenergy and Byproducts. *Journal of Energy andNatural resources*.3 (4):51-57

Nahar. K and R. Borna. 2013. In Vitro Plant Regeneration from Shoot Tip Explants of Jatropha Curcas L: A Biodiesel Plant. *ARPNJournal of Science and Technology*. ***3***(1):38-42

Nahar.K. 2013. Castor Bean (*Ricinus communis L.*) - A Biofuel Plant:Morphological and Physiological Parameters Propagated fromSeeds in Bangladesh. *Asian Business Review*, ***2***(2): 64-66

Nahar. K & Hoque. S. 2013. A Morphological and Physiological Study of Jatropha curcas Linn. Propagated from Seeds inBangladesh. *Middle-East Journal of Scientific Research*, ***13***(8), 1115-1118

Nahar. K and R.S. Borna, 2012. *In vitro* Propagation from Shoot tip Explants of Castor oil plant (*Ricinus communis* L): A Bioenergy Plant, *CanadianJournal on Scientific and Industrial Research.* **3** (5):354-355.

Nahar. K and S.M. Ullah, 2012. Morphological and Physiological Characters of Tomato (Lycopersicon esculentum Mill) Cultivars under WaterStress. *Bangladesh Journal of Agricultural Research*, ***37***(2): 355-360.

Nahar. K. 2012. Biogas Production from Water Hyacinth (*Eichhornia Crassipes*). *Asian Journal of Applied Science and Engineering.* ***1***(1): 9-13

Nahar. K and S.A. Sunny, 2011. Extraction of Biodiesel from a Second-Generation Energy Crop (Jatropha curcas L.) by Transesterification Process. *Journal of Environmental Science and Technology*, **4**: 498-503.

Nahar. K and M. Ozores Hampton, 2011. Jatropha: An Alternative Substitute of Fossil Fuel. University of Florida, USA, *IFASExtension*. http://edis.ifas.ufl.edu/HS1193

Nahar. K. 2011.Sweet Sorghum: An alternate feedstock for Bioethanol. *Iranica Journal of Energy and Environment*. ***2*** (1): 58 -61,

Nahar. K; S.M. Ullah and N. Islam, 2011. Osmotic Adjustment and Quality Response of Five Tomato Cultivars (Lycopersicon esculentum Mill) Following Water Deficit Stress under Subtropical Climate. *Asian Journal of Plant Sciences.* ***10*** (2): 153-157.

Nahar. K, S. A. Sunny and S. S. Shazi, 2011. Land Use requirement and urban growth Implications for the production of biofuel in

Bangladesh. *Canadian Journal on Scientific and Industrial Research*. ***2***(6): 195-208.

Nahar. K and R. Gretzmacher. 2011. Response of Shoot and Root Development of Seven Tomato Cultivars in Hydrophonic System under WaterStress. *Academic Journal of Plant Sciences, **4***(2): 57-63.

Nahar. K., S. M. Ullah and R. Gretzmacher. 2011. Influence of soil moisture stress on height, dry matter and yield of seven tomato cultivars.*Canadian Journal of Scientific and Industrial Research*. ***2***(4):160-163.

Nahar. K and S.M Ullah, 2011. Effect of water stress on moisture content distribution in soil and morphological characters of two tomato(*Lycopersicon esculentum* Mill) cultivars. *Bangladesh Journal of Scientific research. **3*** (3): 677-682.

Nahar. K and R. Gretzmacher. 2002. Effect of water stress on nutrient uptake, yield and quality of tomato (L.e) under subtropical conditions DieBodenkultur. *Austrian Journal of Agricultural Research*. ***53***: 45-51.

S.A. Ahad, A.S.M. Mohiuddin and K.Nahar. 1993. A Study of some morphological and physical properties of soils from Raojan Rubber Plantationof Chittagong, Bangladesh. *Journal of Soil Science. **24*** (1&2) 31-39.

M.S. Hussain, K. Nahar, A.K.M.E. Islam and S.F. Elahi, 1989. A Morphological and clay mineralogical study of some soils from Bhola District inBangladesh. *Dhaka University Studies.* Part B, ***4*** (2): 93-104

Book/Book chapter:

Nahar. K. 2025. Jatropha curcas L. A potential 2G energy crop for production of biofuel in Bangladesh, Agronomy, biotechnology, bioenergy and byproducts, in Environmental Science and Engineering series (Book), Springer Nature. ISBN: 978-3-031-77642-7

Nahar. K. 2022. Climate Change Adaptation in Bangladesh Agriculture in "50 years of Bangladesh, A tale of a miracle" (Book chapter). Prothoma. Prokashan. ISBN 978 98496750 13

Naha. K and S.A. Sunny, 2021. Climate Change and State of Renewable Energy in Bangladesh: An Environmental Analysis. In "Climate Change in Bangladesh," (Book chapter) Springer ISBN: 978-3-030-75825-7

Nahar.K. 2014. Soils of the Coastal Belt of Bangladesh. ISBN: 978-3-639-66686-1. Scholars' Press

Nahar. K. 2014. Effect of Water Stress on Nutrient Uptake, Osmotic Adjustment and Root Development in Different Tomato Cultivars. ISBN 978-1-312-59237-7. Lulu Publisher

Nahar. K 2011. Cultivation of Jatropha curcas L. in Bangladesh: A Sustainable Solution to the Energy, Environmental and Socioeconomic Crisis. ISBN: 978-3-639-36580-1. VDM Publisher.

International Conference Proceeding: "Perceiving and Executing Sound Environmental Design Strategies – A global visual framework". 2021, DCA International Conference, Atlanta, USA, Sanwar A. Sunny and Kamrun Nahar, University of Baltimore, USA, and North South University, Bangladesh

"Urea Fertilization: Effects on growth, nutrient uptake and root development of the biodiesel plant, castor bean (*Ricinus communisL*). "Global Biotechnology Congress 2014". Boston USA.

"Biodiesel Production from Jatropha curcas- Sustainable energy option with environmental and socioeconomic benefits".International Green Energy Conference, 2016" at Atlanta, USA.

Newspaper Articles:

- K. Nahar. (Feb 23, 2013). Sustainable Green Energy Option: Prospect for second generation biofuel crops. Environment Section. *The Daily Star.*
- K. Nahar. (May 16, 2013). Sustainable Biogas from Water Hyacinth. Environment Section. *The Daily Star.*
- K. Nahar. (January, 2016). Climate change adaptation, mitigation and Biofuel prospects in Bangladesh. Environment Section. *The Daily Observer*

INVITED LECTURES & SEMINAR

- Attended the workshop as a key speaker on renewable energy (biofuel-Jatropha) organized by Bangladesh Green Building Council (BGBC) at AIUB (American International University, Bangladesh)
- Invited on an Environmentalists Dialogue Event on Climate Change at the American Centre, Bangladesh
- Invited on *Prokriti O Jibon* (Nature and Life) TV series about Green Economy on National Television, Channel I station

AFFILIATION & MEMBERSHIP

Life member, Asiatic Society of Bangladesh
Member, Soil Science Society of America
Member, Soil Science Society of Bangladesh
Founding Member, Bangladesh Green Building Council (BGBC)
Member, Dhaka University Soil Science Alumni Association
(DUSSAA)
Former Secretary and Member, Institute of Environmental Professionals - Bangladesh (IEPB)
Member, Soil, Water and Environment Department of Dhaka University Trust (SWED-DU Trust)
Member, Bangladesh Association for the Advancement of Science (BAAS)
Reviewer of the Journal of Environment, Development and Sustainability, Netherlands
Parlar Scientific Publication (PSP), Fresenius Environmental Bulletin, Germany

LANGUAGES

English, German, Hindi and limited Arabic

OFFICIAL WEBSITE: http://www.kamrun nahar.com