CURRICULUM VITAE

SYED HUMAYUN AKHTER
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Profession Teaching & Research

Professional preparation

1975	**BSc** (Hons) in Geology	University of Dhaka, Bangladesh
1976	**MSc** (Thesis group) in Geology	University of Dhaka, Bangladesh
1986	**PhD** in Geology	Indian Institute of Technology, Kharagpur, India

Professional appointments

1. Vice-Chancellor	Bangladesh Open University	June 30, 2021 to date
2. Professor	Dhaka University	Sept. 2002 to June 29, 2021
3. Associate Professor	Dhaka University	Dec. 1994 to Sept. 2002
4. Assistant Professor	Dhaka University	July 1989 to Dec. 1994
5. Lecturer	Dhaka University	Sept. 1987 to July 1989
6. Research Scholar	IIT, Kharagpur, India	Nov. 1980 to Nov. 1984
7. Assistant Geologist	Petrobangla, Bangladesh	June – Nov. 1980
8. Research Officer	National Museum, Bangladesh	March – May 1980
9. Geologist	Prokaushal Sangshad Ltd., Bangladesh	Nov. 1979 to Feb. 1980

Administrative positions

1. Provost	Dr. Mohammad Shahidullah Hall	June 30, 2018 to June 29, 2021
2. Chairman	Geology Department, DU	July 01, 2013 to June 30, 2016
3. Director	Delta Study Centre, Geology Dept., DU	March 19, 2014 to March 29, 2016
4. Student Advisor	Geology Dept., DU	April 07, 2010 to June 30, 2013
5. House Tutor	Shahidullah Hall, DU	April 1999 to April 2009

Key qualification

Dr Syed Humayun Akhter is specialized in Earthquake Geology, Geodetic GPS, Structural Geology, Tectonics, Thermoluminescence Age Dating, Field Geology, Photogeology & Remote Sensing as well as in Engineering Geology and Natural Hazards.

Dr. Syed Humayun Akhter serves as the Vice-Chancellor of Bangladesh Open University (BOU). With a distinguished academic and professional background, he brings a wealth of experience and expertise to the position. Dr. Humayun Akhter was a professor of Geology at the University of Dhaka, Bangladesh. He received his B.Sc and M.Sc degrees from Dhaka University. He was awarded Indian Government Scholarship in 1980 for post graduate study and eventually earned PhD in 1986 from Indian institute of Technology, Kharagpur. He joined the Department of Geology, University of Dhaka as Lecturer in the year 1987. Dr. Humayun Akhter has a long track record of research collaboration with Lamont-Doherty Earth Observatory (LDEO) of Columbia University in the city of New York, USA and other universities & institutions of USA, UK, Germany, Singapore & India. Dr Humayun Akhter is a visiting scientist at Lamont-Doherty Earth Observatory of Columbia University since 2003. He has considerable experiences of working with the international scientists in the field of geotectonics, earthquake geology, geodetic GPS, and natural hazards. He carried out fieldworks with BanglaPIRE (NSF PIRE project) research team in tectonically active regions of

Himalayan and Burmese deformation front. Dr. Humayun established Dhaka University Earth Observatory (DUEO) and running networks of 6 permanent seismic stations, 27 portable seismographs and 30 continuous geodetic GPS stations. Dr. Humayun Akhter was one of six grant recipient of USAID PEER International Science Collaboration Pilot Program. He was invited at the official launching ceremony of PEER Science in NSF Office, Washington DC for his success in the project. He was an active partner and three members of the Directorate of the NSF PIRE Project, Grant OISE 09-68354. Dr. Humayun Akhter has published good number of research papers (>60 full articles & >80 abstracts) in peer reviewed national and international geosciences journals and presented papers in international workshops and seminars.

Dr. Humayun Akhter established 'Sediment Sample Repository and Data Bank', first of its kind in the country. Organized and conducted training on earthquake geology, earthquake network maintenances, paleoseismology, earthquake hazard analysis, multichannel seismic data processing & interpretation. Developed the infrastructure of "Seismic and Geodesy Lab" at Geology Department, DU with modern facilities for training and advance research on earthquake and seismic hazards.

He has been working on crustal dynamics, Indo-Burma Subduction Zone tectonics, seismicity & subsidence in Bangladesh, project of joint research collaboration between Lamont-Doherty Earth Observatory (LDEO), Columbia University and Dhaka University Earth Observatory (DUEO) under financial support from NSF, USA. Syed Humayun Akhter's work as an earthquake geologist contributes to the broader field of seismology and helps advance the understanding of seismic activity in Bangladesh and the surrounding areas. His research and expertise play a crucial role in enhancing earthquake preparedness, promoting public safety, and informing policies and practices related to disaster management in the region. He writes popular articles and gives TV talks on earthquakes and natural hazards and has been known for his stand in creating public awareness against earthquake hazards in Bangladesh.

Synergistic activities

1. Research Scientist & Coordinator: Architecture, Dynamics and Hazard in the Ganges-Brahmaputra Delta. Joint research programme between Geology Department of Dhaka University and Lamont-Doherty Earth Observatory of Columbia University at New York funded by NSF, USA.
2. Research Collaborator: Basin-wide stratigraphy of the Bengal Basin. Joint research programme between Geology Department of Dhaka University and Geology & Geography Department of Auburn University, USA, funded by NSF.
3. Research Scientist & Coordinator: Collision of the Burma Arc Accretionary Prism and Foldbelt with the Ganges-Brahmaputra Delta in Bangladesh. Joint research programme between Dhaka University Earth Observatory (DUEO at Geology Department of Dhaka University and Lamont-Doherty Earth Observatory of Columbia University at New York funded by NSF, USA.
4. Research Scientist & Coordinator: PIRE: *Life on a Tectonically Active Delta - Convergence of Earth-Science and Geohazard Research in Bangladesh with Education and Capacity Building*" Joint research programme between Dhaka University Earth Observatory (DUEO), Geology Department of Dhaka University and Lamont-Doherty Earth Observatory of Columbia University at New York funded by NSF, USA.
5. Project Investigator of a NSF-USAID Pilot Program PEER (Partnership for Enhanced Education in Research) grant on "*Towards Geohazard Assessment in Bangladesh: Academic Infrastructure and Knowledge Transfer*".
6. Project Investigator of a USAID PEER Science (International Science Collaboration) grant on "*Fostering a Bangladeshi Seismological Community Through Training and Facility Development*" associated with NSF Grant OISE 09-68354 "*PIRE: Life on a Tectonically Active Delta - Convergence of Earth-Science and Geohazard Research in Bangladesh with Education and Capacity Building*".
7. Research Scientist & Coordinator: Collaborative Research: Subduction below extreme sedimentation – A multidisciplinary transect from the Ganges-Brahmaputra Delta to the IndoBurma Backarc. Joint research programme between Dhaka University Earth Observatory (DUEO), Geology Department of Dhaka

University and Lamont-Doherty Earth Observatory of Columbia University at New York funded by NSF, USA. NSF Grant, NSF EAR 17-14892.

8. Faculty Advisor of Society of Exploration Geophysicist (SEG), Dhaka University Student Chapter; Faculty Advisor of Society of Petroleum Engineers (SPE), Dhaka University Student Chapter.
9. Actively involved in developing mass awareness against natural hazard and mitigation.
10. Running Seismic and GPS networks in Bangladesh since 2003.

Experience record

Sept. 1987 to June 2021

DEPARTMENT OF GEOLOGY, UNIVERSITY OF DHAKA: Experienced as Lecturer (from 27.09.1987), Assistant Professor (from 05.07.1989), Associate Professor (from 03.12.1994) and Professor (from 22.09.2002) for over 25 years. Responsible for teaching geology at under-graduate and graduate levels. Subjects taught include Structural Geology, Photogeology & Remote Sensing, Field Geology, Seismology, Disaster & Environment Management; supervising works of **MSc** research students; engaged in research related to structure, tectonics, crustal dynamics and earthquakes in Bangladesh.

June 2012 to May 2015

PI OF USAID SUPPORTED PROGRAMME: Received 3-year grant from USAID-PEER (Partnerships for Enhanced Engagement in Research) Programme on "Towards Geohazard Assessment in Bangladesh: Academic Infrastructure and Knowledge Transfer" The main objectives of the project are to develop a "Sediment Sample Repository and Data Bank" at the Geology Department of Dhaka University and conduct various training courses on "Earthquake Geology", "Multichannel Seismic Data Processing and Interpretation" and "Earthquake Hazard Analysis".

January 2011 to January 2012

PI OF USAID SUPPORTED TRAINING PROGRAMME: Received one-year training grant on "Fostering a Bangladesh Seismological Community through training and facility development". Developed the infrastructure of "Seismic and Geodesy Lab" with modern facilities for training and advance research on earthquake and seismic hazards. Organized two training courses on earthquake seismology. Provided training to 26 participants from 8 universities and 3 government organizations.

March 2000 to date

COLLABORATIVE RESEARCH PROGRAMME: Working as Research Scientist & Collaborator of multiple joint research programmes since 2000 between Lamont-Doherty Earth Observatory (LDEO) of Columbia University in New York, USA and Geology Department of Dhaka University supported by NSF, NASA. Installed and maintaining networks of 6 permanent seismic stations, 11 portable seismic stations and 25 geodetic GPS stations. Sound understanding of the tectonic model and the seismic source faults in and around Bangladesh. Carried out earthquake fieldworks with international scientists in Bangladesh, northeast India, Myanmar and USA. Working to raise earthquake awareness through seminar, electronic and print media.

2006 to date

STUDENT ADVISORS – SPE & SEG: Active member of SPE and SEG. Serving as Student Advisor to both SPE Dhaka University Student Chapter and University of Dhaka Geophysical Society - SEG. Undertook campaign for student memberships of both SPE & SEG. Organized meetings, seminars, fieldworks, student chapter's election, nominations for participating different programmes of SPE and SEG.

March 2001 to June 2002

DEPARTMENT OF PUBLIC HEALTH ENGINEERING, Dhaka, Bangladesh: Research work carried out as a member of Geohazard Research Group (GRG) on The status of arsenic transport in the deep wells at Manikganj district town. Project of the Department of Public Health Engineering, under the financial assistance of UNICEF, Bangladesh.

Nov. 1997 to June 1998

DEPARTMENT OF PUBLIC HEALTH ENGINEERING, Dhaka, Bangladesh: Research work carried out as a member of Geohazard Research Group (GRG) on Subsurface Investigation in the Arsenic Problem areas of Rajarampur, Chalnai and Baragharia; Nawabganj District, Bangladesh. Project of the Department of Public Health Engineering, under the financial assistance of UNICEF, Bangladesh.

July 1997 to Dec. 1997

BANGLADESH WATER DEVELOPMENT BOARD, Dhaka, Bangladesh: Sedimentological and mineralogical studies on arsenic contaminated aquifers within Bangladesh. Project of Ground Water Circle, Bangladesh Water Development Board. 1997.

July 1995 to June 1996

FAP 24 RIVER SURVEY PROJECT, **Dhaka, Bangladesh**: Worked as consultant for FAP 24 River Survey (River Morphology) Project. It includes thin section studies of sand and silt mineralogy; XRD studies of silt and clay mineralogy; angularity, roundness and shape factor of sand particles. These were done on large number of samples collected from Ganges, Bhramaputra, Jamuna and Meghna rivers during the study period.

Nov. 1989 to Jan. 1991

PATHMARK ASSOCIATES LTD, **Dhaka, Bangladesh**: Worked as geologist on Hard Rock Feasibility Study in Chittagong & Chittagong Hill Tracts for the Bangabondhu (Jamuna Multipurpose) Bridge Project. Carried out extensive field and laboratory work. Prepared detail hard rock deposit maps based on field investigations, interpretation of aerial photographs and landsat imageries. Estimated the total reserves of hard rock deposits and prepared monthly and draft final reports.

Jan. 1985 to Aug. 1987

GEOPROBE, **Dhaka, Bangladesh**: Hydrogeologist: Responsibilities include hydrogeological and geoengineering investigations for installation of deep tube wells, mechanical analysis, determination of aquifer parameters, pump test and preparation of maps and reports.

Dec. 1980 to Nov. 1984

DEPARTMENT OF GEOLOGY & GEOPHYSICS, IIT Kharagpur, India: Joined as Research Scholar under the Ministry of Education, Govt. of India Scholarship Scheme. Undergone studies and research leading to **PhD** degree in geology, the study and research covered Thermoluminescence Age Dating, Structure & Tectonics. Carried out extensive fieldwork in a structurally complex Precambrian terrain of West Bengal, India covering 200 sqkm, collecting systematic structural data of different fold generation, planer and linear structures and rock samples to reveal the tectonic history of the area. Done detail structural analysis, **DTA**, **XRD**, chemical analysis and thermoluminescence study. Prepared structural and geological maps using field data, laboratory data and aerial photographs. Measured natural radiation dose and alpha activity of the rocks, and these were applied for age determination.

June 1980 to Nov. 1980

PETROBANGLA, Dhaka, Bangladesh: Served as Assistant Geologist mostly at drilling sites in Muladi-2, Feni-1 and Singra-1. Responsibilities include the duties of a Well Site Geologist.

March 1980 to May 1980

NATIONAL MUSEUM, Dhaka, Bangladesh: Joined as Research Officer and was assigned to build up the geological section of the Natural History Department of the museum. During the short period of stay, a comprehensive report was prepared.

Dec. 1979 to Feb. 1980

PROKAUSHALI SANGSAD LTD, Dhaka, Bangladesh: Worked as hydro-geologist with Nihon Suido of Japan for the `Five district towns water supply feasibility study' project of the Public Health Engineering Department. Performed geo-electric survey in Comilla, Jessore, Barisal, Mymensingh and Bogra towns. Interpreted resistivity data and prepared geological and hydro-geological maps and reports.

July 1978 to June 1979

DEPARTMENT OF GEOLOGY, Dhaka University, Bangladesh: 1 year research experience as graduate student on Structure, Stratigraphy and Sedimentology. Carried out detail field and laboratory investigations. Done structural analysis, grain size analysis, heavy mineral separation and mineralogical study. The work was done in partial fulfilment of the **MSc** degree.

Publications

1. Hossain, K.M. and **Akhter, S.H**. 1983: Structural behaviour of Sitakund Hill Range. Bangladesh Journal of Geology. vol 2, p17-27.
2. **Akhter, S.H**.; Bhattacharya, A.K.; Sen Gupta, D.K. and Kaul, I.K. 1985: Significance of thermoluminescence of the crystalline limestones of Jabar, (Purulia District, West Bengal, India). Nuclear Tracks & Radiation Damage. vol 10, p193-199.
3. **Akhter, S.H**.; Bhattacharya, A.K.; Sen Gupta, D.K. and Kaul, I.K. 1986: Thermoluminescence characteristic of the metasediments of Jabar, Purulia District, West Bengal, India. Journal of the Geological Society of India. vol 27, p460-463.
4. **Akhter, S.H**.; Bhattacharya, A.K.; Sen Gupta, D.K. and Kaul, I.K. 1988: Thermoluminescence characteristics of Proterozoic carbonate formations in parts of Andhra Pradesh and West Bengal, India. *In:* Recent Advances in Quantitative Stratigraphic Correlation. Editors: F.P. Agterberg and C.N. Rao. Hindustan Publishing Corporation, Delhi. p174-179.
5. **Akhter, S.H**. 1988: Thermoluminescence as a guide to mineral exploration. *In:* Ministry of Mines and Metals, Iran. vol 2, p1-27.
6. **Akhter, S.H**.; Chowdhury, S.Q.; Khandaker, N.I. and Khan, F. 1990: Some chemical aspects of diagenetic carbonates from the Miocene of Sitakund, Bangladesh, American Association of Petroleum Geologist, Convention issue. vol 74, p596.
7. **Akhter, S.H**. and Hoque, M. 1993: Recent developments of thermoluminescence study in geology. The Journal of NOAMI. vol 10, p29-37.
8. **Akhter, S.H**. 1993: Thermoluminescence dating: Age determination of metasediments. Bangladesh Journal of Geology. vol 12, p1-18.

9. **Akhter, S.H**. 1995: Thermoluminescence characteristics of fluorites of two geological environments. The Dhaka University Journal of Science. vol 43(1), p45-52.

10. Siddique, A.; Ali, M.H.; **Akhter, S.H**. and Khan, A.J. 1995: Subsurface characteristics of Madhyapara in Bangladesh. *In:* Proceedings of the 10th Asian Regional Conference on Soil Mechanics and Foundation Engineering. Beyjing, China. vol 1, International Academic Publishers. p75-78.

11. Bhuiyan, M.A.H.; Imam, M.B. and **Akhter, S.H**. 1998: Petrofacies analyses of Surma Group sandstone of Sitakund structure, Chittagong, Bangladesh. The Dhaka University Journal of Science. vol 46(1), p17-24.

12. Bhuiyan, M.A.H and **Akhter, S.H**. 1998: Provenance interpretation of Neogene Surma Group sandstones of Sitakund structure, Chittagong, Bangladesh. The Dhaka University Journal of Science. vol 46(2), p297-305.

13. Khan, A.A.; Hoque, M.; **Akhter, S.H.** and Chouhan, R.K.S. 1998: Multiple elements seismic zoning vis-à-vis state of seismic hazard in Bangladesh. *In:* Proceedings of the International Conference on Disaster Management (ICODIM). Editor: M.C. Bora, p348-364.

14. **Akhter, S.H**.; Bhuiyan, M.A.H.; Hussain, M. and Imam, M.B. 1998: Turbidite sequence located in SE Bangladesh. Oil and Gas Journal. vol 96(51), p109-111.

15. Bhuiyan, M.A.H and **Akhter, S.H**. 1999: Petrography of the sandstone of Surma Group of Sitakund structure, Chittagong, Bangladesh. The Dhaka University Journal of Science. vol 47(1), p43-52.

16. Bhuiyan, M.A.H and **Akhter, S.H**. 1999: Microscopic documentation of diagenetic changes in sandstone of Surma Group of Sitakund structure, Chittagong, Bangladesh. The Dhaka University Journal of Science. vol 47(1), p53-61.

17. Khan, A.A.; **Akhter, S.H**. and Bhuiyan, M.A.H. 1999: Arsenic in groundwater vis-a-vis impact of surface water managment in the Ganges delta of Bangladesh. Oriental Geographer. vol 43(2), p1-14.

18. Khan, A.A. and **Akhter, S.H**. 1999: Tectogenesis of the Bengal geosyncline. Bangladesh Journal of Geology. vol 18, p37-44.

19. Khan, A.A.; **Akhter, S.H**. and Alam, S.M.M. 2000: Evidence of Holocene transgression, dolomitization and the source of arsenic in the Bengal delta. *In:* Geoengineering in Arid Lands. Editors: A.M.O. Mohamed and K.I. Al Hosani. Balkema Publishers, Rotterdam. p351-355.

20. Khan, A.A. and **Akhter, S.H**. 2001: Wrench Tectonics, detachment faults, riedel and ductile shears vis-à-vis seismogenesis of Cimmerian plate. Journal of the Earth and Space Physics, vol 27 (1), p21-31.

21. Khan, A.A.; **Akhter, S.H**., and Hoque, M. 2001: Neotectonic evidence, earthquake vulnerability and mitigation in Bangladesh. *In:* Disaster Issues and Gender Perspectives. Editors: N. Ahmed and H. Khatun. Bangladesh Geographical Society. p19-26.

22. Khan, A.A.; Hoque, M.; **Akhter, S.H**. and Hoque, M.A. 2001: Earthquake in Bangladesh – A natural disaster and public awareness. The Journal of NOAMI. vol 18(2), p37-46.

23. Khan, A.A.; **Akhter, S.H**.; Hasan, M.A.; Ahmed, K.M. and Imam, B. 2001: Etiology of arsenic in the groundwater of the Bengal Delta - constraints from geological evidences. *In:* Groundwater

Arsenic Contamination in the Bengal Delta Plains of Bangladesh. Editors: G. Jacks, P. Bhattacharya and A.A. Khan. Proceedings of the KTH-Dhaka University Seminar, Dhaka, Bangladesh. KTH-DU Special Publication, TRITA-AMI Report 308, Royal Institute of Technology, Stockholm, Sweden. ISBN: 91-7283-076-X.

24. Khan, A.A. and **Akhter, S.H**. 2001: Can geophysical resistivity detect arsenic contaminated aquifer? *In:* Groundwater Arsenic Contamination in the Bengal Delta Plains of Bangladesh. Editors: G. Jacks, P. Bhattacharya and A.A. Khan. Proceedings of the KTH-Dhaka University Seminar, Dhaka, Bangladesh. KTH-DU Special Publication, TRITA-AMI Report 308, Royal Institute of Technology, Stockholm, Sweden. ISBN: 91-7283-076-X.
25. Ahmed, K.M.; Imam, B.; Hasan, M.A.; **Akhter, S.H**. and Khan, A.A. 2001: Sedimentology and mineralogy of the arsenic contaminated aquifers in the Bengal delta of Bangladesh. *In:* Groundwater Arsenic Contamination in the Bengal Delta Plains of Bangladesh. Editors: G. Jacks, P. Bhattacharya and A.A. Khan. Proceedings of the KTH-Dhaka University Seminar, Dhaka, Bangladesh. KTH-DU Special Publication, TRITA-AMI Report 308, Royal Institute of Technology, Stockholm, Sweden. ISBN: 91-7283-076-X.
26. Khan, A.A.; Alam, S.M.M. and **Akhter, S.H**. 2001: Role of clay in preventing arsenic dispersion in the Ganges delta of Bangladesh. *In:* Clay Science for Engineering. Editors: K. Adachi and M. Fukue. Balkema Publishers, Rotterdam. P321-326.
27. Monsur, M.H.; Tooley, M.J.; Ghatak, G.S.; Chandra, P.R.; Roy, R.K.; Adhikari, P.C. and **Akhter, S.H**. 2001: A Review and Correlation of Quaternary Deposits exposed in the Bengal Basin and its Surrounding areas. Bangladesh Journal of Geology. Vol 20. p33-54.
28. Imam, M.B.; Rahman, M. and **Akhter, S.H**. 2002: Coal bed methane prospect of Jamalganj Coalfield, Bangladesh. Arabian Journal of Science and Engineering. vol 27(1A), p17-27.
29. Khan, A.A.; **Akhter, S.H**.; Ahmed, K.M. and Hasan, M.A. 2002: VES signature in soft rock groundwater exploration vis-à-vis geoenvironmental implications. *In:* Groundwater Hydrology. Editors: M.M. Sherif, V.P. Singh and M. Al-Rashed. Volume 2. Balkema Publishers, Rotterdam. P179-193.
30. Khan, A.A.; Hoque, M.A.; Shaharier, K.M.; **Akhter, S.H**. and Hoque, M. 2002: Convergent Tectonics and Sedimentation in the Eastern Margin of the Indian Plate with emphasis on the Bengal Basin. Bangladesh Journal of Geology. vol 21, p9-22.
31. Huque, M.A.; Rahman, M.Z.; **Akhter, S.H.** and Bhuiyan, A.H. 2003: Thin-section Petrography of the Permian Gondwana Coal-bearing Sandstones of the Barapukuria Basin, Dinajpur, Bangladesh. Bangladesh Journal of Geology. vol 22, p71-83.
32. Ahmed, K.M.; Bhattacharya, P.; Hasan, M.A.; **Akhter, S.H.**; Alam, S.M.M.; Bhuyian, M.A.H.; Imam, M.B.; Khan, A.A. And Sracek, O. 2004: Arsenic enrichment in groundwater of the alluvial aquifers in Bangladesh: an overview. Applied Geochemistry. vol 19, p181-200.
33. **Akhter, S.H.** and Huque, M.A. 2004: RIS (?) and its Impact on Kaptai Hydroelectric Project: A Shift in the Conceptualistic Model on the Origin of the Barkol Earthquake. Bangladesh Journal of Geology. vol 23, p139-146.
34. Uddin, A., Kumar, P., Sarma, J.N., and **Akhter, S.H.** (2007) Heavy-mineral constraints on provenance of Cenozoic sediments from the foreland basins of Assam, India and Bangladesh: Erosional history of the eastern Himalayas and the Indo-Burman ranges, in Mange, M.A., and

Wright, D.T., eds., Heavy minerals in use, Developments in Sedimentology, Elsevier, Amsterdam, v. 58, p. 823-847.

35. Najman, Y., Bickle, M., BouDagher-Fadel, M., Carter, A., Garzanti, E. Paul, Wijbrans, M. J., Willett, E., Oliver, G., Parrish, R., **Akhter, S.H.,** Allen, R. Ando, S., Chisty, E., Reisberg,L. and Vezzoli, G.: The Paleogene record of Himalayan erosion: Bengal Basin, Bangladesh. Earth and Planetary Science Letters, Vol. 273, p1-14.
36. Steckler, M., **Akhter, S.H.** and Seeber, L. 2008: Collision of the Ganges-Brahmaputra Delta with the Burma Arc. EPSL, Vol. 273, p367-378.
37. Small, C., Steckler, M., Seeber, L., **Akhter, S.H.,** Goodbred, S., Mia, B. and Imam, B. 2009: Spectroscopy of Sediments in the Ganges-Brahmaputra Delta: Spectral Effects of Moisture, Grain Size and Lithology. Remote Sensing of Environment, Vol. 113, p342-361.
38. Maitra, M.K. and **Akhter, S.H.** 2010: Neotectonic activitities along Madhupur Tract and its adjoining areas. *In:* Proceedings of the 3rd International Earthquake Symposium, Bangladesh, March 5-6, 2010, BUET, Dhaka, Bangladesh. Editors: R. Ahsan, M.S. Islam, A. Shahriar, M A. Noor & T.M. Al-Hussaini. P.81-90.
39. Steckler, M., Nooner, S.L., **Akhter, S.H.,** Chowdhury, S.K., Bettadpur, S., Seeber, L., and Kogan, M.G. 2010: Modeling Earth Deformation from Monsoonal Flooding in Bangladesh using Hydrographic, GPS and GRACE Data. Journal of Geophysical Research.
40. **Akhter, S.H**. 2010: Earthquakes of Dhaka. In: Environment of Capital Dhaka - Plants Wildlife Gardens Parks Air Water and Earthquake. Ed: M.A. Islam, Celebration Series, Asiatic Society of Bangladesh, p.401-426.
41. Bodruddoza Mia, M; Hasan, K. and **Akhter, S.H.**, 2010: Landuse-Landcover Mapping using satellite image within gas exploration blocks 7, Bangladesh. The Dhaka University Journal of Earth and Environmental Sciences, Faculty of Earth and Environmental Sciences, University of Dhaka, Vol. 1(1), p29-34.
42. Maitra, M.K. and **Akhter, S.H.** 2011: Neotectonics in Madhupur Tract and its surrounding floodplains. The Dhaka University Journal of Earth and Environmental Sciences, Faculty of Earth and Environmental Sciences, University of Dhaka, Vol. 1 (2), p83-89.
43. Paul, S.S., Hasan, K., Akhter, S.H., and Li, Jianbing, 2012: Application of remote sensing and GIS analysis for investigating urbanization induced surface water body change in and around Dhaka city, Bangladesh. Conference: Proceedings of the 12th International Environmental Specialty Conference, Canadian Society for Civil Engineering, Volume: ENV-1029.
44. Morino, M, Kamak, A.S.M.M, **Akhter, S.H**, Rahman, M.Z, Ali, R.M.E, Talukder, A, Khan, M.M.H, Matsuo, J. and Kaneko, F. 2014: A paleo-seismological study of the Dauki fault at Jaflong, Sylhet, Bangladesh: Historical seismic events and an attempted rupture segmentation model. Journal of Asian Earth Science. Vol. 91, p218-226.
45. Higgins, S.A, Overeem, I, Steckler, M.S, Syvitski, J.P.M, Seeber, L. and **Akhter, S.H.** 2014: InSAR Measurements of Compaction and Subsidence in the Ganges-Brahmaputra Delta, Bangladesh. Journal of Geophysical Research: Earth Surface, Vol. 119 (8), p1768-1781.
46. Reitz, M.R., Pickering, J.L., Goodbred, S.L., Paola, C., Steckler, M.S., Seeber, L. and **Akhter, S.H.** 2015: Effects of tectonic deformation and sea level on river path selection: Theory and

application to the Ganges-Brahmaputra-Meghna River Delta. J. Geophys. Res. Earth Surf., 120, doi:10.1002/2014JF00320.

47. Bracciali, L., Najman, Y., Parrish, R.R., **Akhter, S.H**., Millar, J., 2015: The Brahmaputra tale of tectonics and erosion: Early Miocene river capture in the Eastern Himalaya. EPSL, Vol. 415, p25-37.
48. Singh, A., Bhushan, K., Singh, C, Steckler, M.S., **Akhter, S.H**., Seeber, L., Kim, W.Y., Tiwari, A.K., Biswas, R., 2016: Crustal structure and tectonics of Bangladesh: New constraints from inversion of receiver functions. Tectonophysics, Vol. 680, p99-112.
49. Islam, M.A.; Mitra, D.; Dewan, A. and **Akhter, S.H.,** 2016 Coastal multi-hazard vulnerability assessment along the Ganges deltaic coast of Bangladesh–A geospatial approach. *Ocean & Coastal Management* **127**, 1-15. Online publication date: 1-Jul-2016
50. Steckler, M.S.; Mondal, D.R; **Akhter, S.H**.; Seeber, L.; Feng, L.; Gale, J.; Hill, E.H. and Howe, M. 2016: Locked and loading megathrust linked to active subduction beneath the Indo-Burman Ranges. Nature Geoscience, Letts., DOI: 10.1038/NGEO2760, p1-5.
51. Islam, M.A, Murshed, S, Kabir, S.M.M, Farazi, A.H, Gazi, M.Y, Jahan, I and **Akhter, S.H**, 2017: Utilization of Open Source Spatial Data for Landslide Susceptibility Mapping at Chittagong District of Bangladesh—An Appraisal for Disaster Risk Reduction and Mitigation Approach. International Journal of Geosciences, Vol. 8(4), p. 577-598, DOI: 10.4236/ijg.2017.84031.
52. Steckler, M.S.; Stein, S; **Akhter, S.H**.; Seeber, L. 2018: The wicked problem of earthquake hazard in developing countries: the example of Bangladesh. Accepted in Eos (Paper #2017ES005464).
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List of Unpublished Research Works

1. Akhter, S.H. 1979: Structure, Stratigraphy and Sedimentology of the Upper Tertiary Sediments of the central part of the Sitakund Hill Range, Chittagong, Bangladesh. Unpublished M.Sc thesis, Geology Department, University of Dhaka, Dhaka, Bangladesh. 143p.
2. Akhter, S.H. 1984: Geological and Thermoluminescence studies on crystalline limestones from a highly deformed terrain of Jabar, Purulia District, West Bengal, India. Ph.D thesis, Geology & Geophysics Department, Indian Institute of Technology, Kharagpur, India.

Research & Development Project

1. Investigator: Five district towns water feasibility study. November 1979 to February 1980. DPHE project conducted by Prokaushali Sangsad Limited in collaboration with Nihon Suido of Japan.
2. Investigator: Hard Rock Study in Chittagong and Chittagong Hill Tracts. October 1990 to March 1991. JMBA project conducted by PATHMARK Limited.
3. Investigator: Mineralogical and physical property of river sediments. 1995-1996. FAP24 River Survey Project.
4. Investigator: Study of geological conditions of arsenic contaminated acquifer of Nawabganj district of Bangladesh. 1997-1998. UNICEF-DPHE research project.
5. Investigator: Sedimentalogical and mineralogical studies within Bangladesh. BWDB research project.
6. Investigator: The status of arsenic transport in the deep wells at Manikganj district town. 2001-2002. UNICEF-DPHE research project.
7. Research Scientist & Coordinator: Architecture, Dynamics and Hazard in the Ganges-Brahmaputra Delta. Joint research programme between Geology Department of Dhaka University and Lamont-Doherty Earth Observatory of Columbia University at New York funded by NSF, USA.
8. Research Collaborator: Basin-wide stratigraphy of the Bengal basin. Joint research programme between Geology Department of Dhaka University Geology Department of Auburn University, USA, funded by NSF.

9. Research Scientist & Coordinator: Collision of the Burma Arc Accretionary Prism and Foldbelt with the Ganges-Brahmaputra in Bangladesh. Joint research programme between Dhaka University Earth Observatory (DUEO), Geology Department of Dhaka University and Lamont-Doherty Earth Observatory of Columbia University at New York funded by NSF, USA.
10. Research Scientist & Coordinator: PIRE: Life on a Tectonically Active Delta - Convergence of Earth-Science and Geohazard Research in Bangladesh with Education and Capacity Building" Joint research programme between Dhaka University Earth Observatory (DUEO), Geology Department of Dhaka University and Lamont-Doherty Earth Observatory of Columbia University at New York funded by NSF, USA.
11. Project Investigator: "Fostering A Bangladeshi Seismological Community Through Training And Facility Development" funded by USAID.
12. Project Investigator: "Towards Geohazard Assessment in Bangladesh: Academic Infrastructure and Knowledge Transfer" funded by USAID-PEER Program.
13. Co-Investigator: TREMBLE: "Temporary Receivers for Monitoring Bangladesh Earthquakes" Joint research programme between Dhaka University Earth Observatory (DUEO), Geology Department of Dhaka University and Earth Observatory of Singapore, Nanyang Technological University, Singapore funded by NSF, Singapore.
14. Research Scientist & Coordinator: Collaborative Research: Subduction below extreme sedimentation – A multidisciplinary transect from the Ganges-Brahmaputra Delta to the IndoBurma Backarc. Joint research programme between Dhaka University Earth Observatory (DUEO), Geology Department of Dhaka University and Lamont-Doherty Earth Observatory of Columbia University at New York funded by NSF, USA. NSF Grant, NSF EAR 17-14892.
15. Research Scientist & Coordinator: Collaborative Research: The dynamic iron curtain surrounding fluctuating rivers and its impacts on arsenic fate and transport. Joint research programme between Dhaka University Earth Observatory (DUEO), Geology Department of Dhaka University and Texas A&M University funded by NSF, USA.
16. Investigator: A pilot project to mitigate the waterlogging problem in the Dr. Muhammad Shahidullah Hall campus of Dhaka University with an innovative technology. Funded by Ministry of Science and Technology, Govt. of Bangladesh.

Computer Literacy

Well conversant with computer: hardware maintenance & troubleshooting, software installation. Operating Systems: Mac, LINUX, MS-Dos, Windows 98/Me/XP/2000. Application Programme: MS Office, Adobe Illustrator & Photoshop, Geological Software Packages like; Surfer, Grapher. Image Processing: ERDAS IMAGINE. GPS data processing software: GAMIT_GLOBK. Seismic software: Antelope, Earthworm. Internet: Skilled in Web Page design.

Collaborators & Other Affiliations

1. **Collaborators**

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Professional affiliations

Life member, Geological Society of Bangladesh

Member, American Geophysical Union (**AGU**) & Geological Society of America (**GSA**)

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