



## CV of Professor Dr. Engr. M.A.I. Chowdhury

**NAME: MOHAMMOD AKTARUL ISLAM CHOWDHURY**

### **POSITION HOLD**

Senior-most Faculty Member and Currently Head in the rank of PROFESSOR from June 04, 2009 as well as FORMERLY HEAD since 1996 including foundation state (except December 1998 to May 2003) to August 05, 2008, Civil and Environmental Engineering (Formerly Environmental Engineering and Pollution Control) Department, Shahjalal University of Science and Technology (SUST), Sylhet, Bangladesh.

### **ADDRESS**

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Shahjalal University of Science and Technology (SUST), Sylhet,  
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### **EDUCATION**

- (i) PhD degree in Environmental Engineering
- (ii) M. Sc. In Water Quality Management (Water Resource Engineering) from **Katholic University of Leuven (KUL)/Vrije University (Free University) of Brussels (VUB), Belgium.**
- (iii) Post Graduate Diploma in Sanitary Engineering from **International Institute of Infrastructure, Hydraulic and Environmental Engineering (IHE), Delft, The**

- Netherlands.** and  
 (iv) B. Sc. In Civil Engineering (BUET), Dhaka, Bangladesh in January, 1990.

**OUTSTANDING ACDEMIC RESULT:** Stood 15<sup>th</sup> in order of merit in S.S.C. examination among fifty thousands students under the Board of Intermediate and Secondary Education, Comilla.

#### **OTHER TRAINING**

- (1) About 3 months practical training and field trip on Embankment and Flood Control, Sludge Treatment and Management, Solid Waste Management, Water Supply, Water Treatment, Wastewater Treatment, Industrial Wastewater Treatment, Water Quality Monitoring in Austria, Belgium, Germany, Luxembourg, the Netherlands, and Switzerland during Post Graduation and Master Degree Courses during 1993-1995;
- (2) Workshop on “Leadership in Engineering Service Associations” organized by the Institutions of Engineers, Bangladesh held in September 1996;
- (3) Training program for Trainers (TOT) Module – I, II and III organized by International Training Network (ITN for Water and Waste Management, Bangladesh Centre held in Bangladesh University of Engineering & Technology (BUET) from June 20 to 25, 1997; January 1998 and November 1998,
- (4) Workshop on Participatory Approaches for Community Development organized by International Training Network (ITN for Water and Waste Management, Bangladesh Centre held in Bangladesh University of Engineering & Technology (BUET) from May 12-13, 2001,
- (5) Specialized Course on Arsenic of Groundwater in Bangladesh held in BUET organized by ITN Bangladesh from May 18 to 23, 2002.
- (6) Advanced Training on Membrane Technology organized by University of Applied Sciences Karlsruhe (UASK) of Germany, Institute for Membrane Technology ITM-CNR of University of Calabria of Italy, SUST of Bangladesh and Jianguo Polytechnique University of China from September 01 to October 05, 2005.
- (7) Specialized Course on Quantitative Health Risk Assessment held in BUET organized by ITN Bangladesh from June 18 to 19, 2007.
- (8) Specialized Course on Urban Sanitation and its Challenges held in BUET organized by ITN Bangladesh from October 31 to November 02, 2007.

#### **PUBLICATIONS**

Around 100 technical research articles in International Journals and Seminar and Conference Proceedings as well as around 100 articles on science, technology, rural economy and education system of Bangladesh in Bangla and English Language in national dailies and weeklies of Bangladesh. List of the technical research papers and a few of the important and selected articles published in national dailies and weeklies of Bangladesh are cited below:

#### **Papers Published/Accepted (on press) for publishing in International Technical Journals:**

- (1) **“Unaccounted for Water Management States in Bangladesh”** published in Aqua, Journal of International Water Services Association (IWSA), London, UK Vol. 56 No. 5. 235-24,1997 authorized by **Chowdhury M.A.I**, Ahmed M. F. Rahman M.H. and Bhuiyan M. A.
- (2) **“Experience in Improving Piped Water Supply to the 18 Medium Sized Towns of Bangladesh”** published in, Aqua, Journal of International

- Water Services Association (IWSA), London, UK Vol. 60. No. 5. 287-299, 2001 authorized by **Chowdhury M.A.I**, Ahmed M. F. Zaman K. and Mannaf M. A.
- (3) **“Management of Non Revenue Water in Bangladesh”** Published in “Journal AWWA” Vol. 94:8, 64-75, 2002 published by American Water Works Association authorized by **Chowdhury M.A.I**, Ahmed M. F. and Gaffer M.A.
  - (4) **“Surface Water Quality in and around Dhaka City”** published in “Aqua, Journal of International Water Association (IWA) (formerly IWSA), London, UK” Vol. 62 No. 2. 141-153, 2003 authorized by Sohel K. M.A., **Chowdhury M.A.I**, Ahmed M. F.
  - (5) **“Solid Waste Pollution in Sylhet City”** published in “Bangladesh Journal of Environmental Science (ISSN 1561-9206)”. Vol. 9, 211-218, 2003 authorized by Rahman M.T., Sarker M.S.K.A., **Chowdhury M.A.I**, Haque K.E. and Hasan M.M.
  - (6) **“Impact of Industrial and Municipal Waste on Surrounding Water Bodies of Dhaka City”** published in “Bangladesh Journal of Environmental Science (ISSN 1561-9206)”. Vol. 9, 297-303, 2003; authorized by Sohel K. M.A., **Chowdhury M.A.I**, Ahmed M. F.
  - (7) **“Environmental Pollution Caused by Natural Gas Factory Ltd., Fenchugang, Sylhet”** published in “Bangladesh Journal of Environmental Science (ISSN 1561-9206)”. Vol. 10, 197-205, 2004; authorized by Sarker M.S.K.A., **Chowdhury M.A.I**, Alam . R., Khan M.N.A. Datta P. and Dakua A.S. M.S.I.
  - (8) **“Probable Building Damage by Earthquake in Sylhet City”** published in *“Bangladesh Journal of Environmental Science (ISSN 1561-9206)”. Vol. 11, No 1, 50-57, 2005; authorized by M. Ahmed, M.A. Ansary, M.A.I. Chowdhury, M.S. Ahmed, and M. Rahman.*
  - (9) **“Effectiveness of Activated Alumina Bed in Removing Arsenic From Groundwater in the Presence of Anion”** published in “Bangladesh Journal of Environmental Science (ISSN 1561-9206)”. Vol. 11, No 1, 128-134, 2005; authorized by M.A. Hoque, M. A. Jalil, **M.A.I. Chowdhury**, and F. Ahmed.
  - (10) **“Destroying Hills in the Northeastern Part of Bangladesh: A Qualitative Assessment of Extent of the Problem and its Probable Impact”** published in “International Journal of Environmental Science and Technology (ISSN 1735-1472),” Vol..2, No. 4, 301-308, 2005, published by Iranian Society Environmentalists authorized by S. Islam, G. M. Jahid Hasan and **Md Aktarul Islam Chowdhury**.
  - (11) **“Estimation of Earthquake Damage in Water Pipeline of Sylhet City”** published in “Bangladesh Journal of Environmental Science (ISSN 1561-9206)”. Vol. 11, No 2, 253-260, 2005; authorized by M. Ahmed, **M.A.I. Chowdhury**, M.A. Ansary, M.H. Rahman, and K.A. Khan.
  - (12) **“Lead Pollution in two Cities of Bangladesh”** published in “Bangladesh Journal of Environmental Science (ISSN 1561-9206)”, Vol. 11, No 2, 323-327, 2005; authorized by M. A. S. Biswas, **M.A .I. Chowdhury**, and M. E. Nabi
  - (13) **“Sanitation Improvement in the Rural Areas of Bangladesh”** published in “Bangladesh Journal of Environmental Science (ISSN 1561-9206)”, Vol. 11,

- No 2, 261-268, 2005; authorized by **M. A. I. Chowdhury**, M. R. Alam and M. S. Islam
- (14) **Water Quality Assessment of Surma River in Sylhet City** published in “Journal of Chemical Engineering (ISSN: 0379-4318)” Vol. 23, No. 1. 63-66; published by The Institution of Engineers Bangladesh authorized by S.A. Iqbal, E. Haque, M. Iqbal and **M.A.I. Chowdhury**.
- (15) **“Potentiality of the River Surma as an Alternative Source of Water Supply”** published in “Bangladesh Journal of Environmental Science (ISSN 1561-9206)”, Vol. 12, No 1, 111-116, 2006; authorized by M.S.K.A. Sarker, **M.A.I Chowdhury**, R. Sharmin and M.J. Yasmin.
- (16) **“Study of Traffic Environment : a Case Study in Sylhet City Corporation Area”**, published in “Bangladesh Journal of Environmental Science (ISSN 1561-9206)”, Vol. 12, No 1, 123-128, 2006; authorized by Rifath Sharmin, **Chowdhury M.A.I**, Sarker M.S.K.A., and M.S. Haque.
- (17) **“Deteriorated Environmental Condition of Some Kitchen Markets in Sylhet City”** published in “Bangladesh Journal of Environmental Science (ISSN 1561-9206)”, Vol. 12, No 1, 89-94, 2006, authorized by M.A. Hoque, **M.A.I. Chowdhury**, M. Ahmed, and M.N.H. Mehdi.
- (18) **“Development of a Model of Sewage Collection System for a Small Community”** published in Journal of Jahangirnagar University Planning Review (ISSN 1728-4198), Vol 4 ,115-122, 2006 authorized by M.A. Hoque, Ahmed M., **Chowdhury M.A.I**, and R.Alam.
- (19) **“Municipal Waste Management and Environmental Hazards in Bangladesh”** published in “Asian Journal of Water, Environment and Pollution (ISSN ),” Vol. 3, No. 1 pp. 39-48, 2006, authorized by G. M. Jahid Hasan and **Md Aktarul Islam Chowdhury**.
- (20) **“How does Arsenic Contamination of Groundwater Cause Severity and Health Hazard in Bangladesh?”** published in “Pakistan Journal of Applied Sciences (ISSN 1812-5654)”, Vol. 6, No. 6, 1275-1286, 2006, published by Asian Network for Scientific Information authorized by **M.A.I. Chowdhury**, T. Uddin, M.F. Ahmed, M.A. Ali and S.M. Uddin.
- (21) **“Collapse of Socio-economic Base of Bangladesh by Arsenic Contamination in Groundwater”** published in “Pakistan Journal of Biological Sciences (ISSN 1028-8880)”, Vol 9, No 9., 1617-1627, 2006 published by Asian Network for Scientific Information authorized by **M.A.I. Chowdhury**, T.Uddin, M.F. Ahmed, M.A. Ali, S.M. A.Rasul, M.A. Hoque, R. Alam, R. Sharmin, S.M. Uddin and M. S. Islam.
- (22) **“Municipal Wastewater Characteristics of Sylhet City in Bangladesh”** published in “Green Journal (ISSN 1076-7975)”, Issue 23, Spring 2006 authorized by Raquibul Alam, Mushtaq Ahmed, **Md. Aktarul Islam Chowdhury**, and Suman Kanti Nath.
- (23) **“Solid Waste Management in Katmandu, Capital City of Nepal”** published in Journal of Solid Waste Technology and Management (ISSN: 1088-1697) Vol. 32, No. 2., 2006, authorized by R.Alam, **M.A.I. Chowdhury**, G.M. J. Hasan, B. Karanjit, and L.R. Shrestha.
- (24) **“Socio-cultural Evaluation of Sanitation Hygiene in Sylhet City of Bangladesh”** published in ARPN Journal of Engineering and Applied Sciences (ISSN 1879-6608) Vol 1, No. 3, 2006, 68-78 published by Asian Research

- Publishing Network authorized by Mushtaq Ahmed, M.A. Hoque, M.S.K.A. Sarker, Md. Akterul Islam Chowdhury, and Anwara Begum.
- (25) **“Influence of Some Selected Water Quality Parameters in Removing Trivalent and Pentavalent Arsenic from Groundwater by Activated Alumina”** published in Asian Journal of Water, Environment and Pollution, (ISSN 1728-4198), Vol 4 , No. 1 pp 161-167, 2007 authorized by M.A. Hoque, M. A. Jalil, M. A. I. Chowdhury and F. Ahmed.
- (26) **“Generation, Storage, Collection and Transportation of Municipal Solid Waste – A Case Study in the City of Kathmandu, Capital of Nepal”** authorized by R. Alam, M.A.I. Chowdhury, G.M.J. Hasan, B. Karanjit, and L.R. Shrestha published in the Journal Waste Management 28 (2008) , 1088-1097 published by Elsevier Ltd.
- (27) **“Endangered in Biodiversity in Hakaluki Haor”** published in *“Bangladesh Journal of Environmental Science (ISSN 1561-9206)”*, Vol. 13, No 2, 450-457, 2008, authorized by M.S.Islam, M.A.I. Chowdhury, and M. Saiful Islam.
- (28) **“Study on environmental awareness, attitude and behavior of students of Shahjalal University of Science and Technology, Sylhet, Bangladesh”** published in *“Bangladesh Journal of Environmental Science (ISSN 1561-9206)”*, Vol. 13, No 2, 210-215, 2008, authorized by M.T. Uddin, M.A.I. Chowdhury, and M.I. Hossain.
- (29) **“Study on Recycling of Solid Waste in Sylhet City”** to published in *“Environ. Sci. & Natural Resources. ISSN 1999-7361)”* Vol. 1, No.1, 127-132, 2008, published by the Society of Conservation of Environment and Natural Resources (SCENR), authorized by M. A. I. Chowdhury, R. K. Chowdhury, R. Alam, H.M.A. Mahzuz, M. S. Islam, A. Z. Mahbub, I. Jahan and M. B. Haque.
- (30) **“Jhum cultivation in Bandarban Hill Tracts-Degradation of Hilly Environment”** published in *“Environ. Sci. & Natural Resources. ISSN 1999-7361)”* Vol. 1, No.1, 137-142, 2008, published by the Society of Conservation of Environment and Natural Resources (SCENR), authorized by M.S.Islam, M.A.I. Chowdhury, M. Saiful Islam, M.B. Haque and S. M. Saleem.
- (31) **“ EIA of Rural Electrification in Sylhet Division”** published in *“Environ. Sci. & Natural Resources. ISSN 1999-7361)”* published by the Society of Conservation of Environment and Natural Resources (SCENR), Vol. 1, No.1, 143-150, 2008, authorized by Mesbah Uddin, M.A.I. Chowdhury, Md. Golam Dastagir and Md, Mohibullah.
- (32) **“Low and Intermediate Level Radioactive Waste Management in Bangladesh”** authorized by Md. Akterul Islam Chowdhury, Raquibul Alam, M. Nurul Alam, Ishtiaque Shahriar Alam, H.M.A.Mahzuz and Md. Jamal Uddin has been accepted to publish in ARPJ Journal of Engineering and Applied Sciences (ISSN 1879-6608) (on press).
- (33) **“Study of Leachate from Lalmatia Dumping Site of Sylhet City Corporation”** published in *“Bangladesh Journal of Environmental Science (ISSN 1561-9206)”* published by Bangladesh Association for Environmental development, Vol No. 15 157-162, authorized by M. A. I. Chowdhury, R. Alam, S. M. Saleem and G. O. F. Hossain.
- (34) **“ Pollution from Traffic Noise in Sylhet City”** published in *“Journal of Environ. Sci. & Natural Resources. ISSN 1999-7361)”* published by the Society of Conservation of Environment and Natural Resources (SCENR), Vol.

- 1, No.2, 155-160, 2008 authorized by M. Ahmed, **M. A. I. Chowdhury**, R. Alam, and S. Das Gupta.
- (35) “**Deteriorated Air Pollution of Sylhet City**” published in “Journal of Environ. Sci. & Natural Resources. ISSN 1999-7361)” published by the Society of Conservation of Environment and Natural Resources (SCENR), Vol. 1, No.2, 179-184, 2008 authorized by **M. A. I. Chowdhury**, S. R. Chowdhury and M. M. Rashid.
- (36) “Study of traffic congestion in Sylhet city” published in “Journal of India Roads Congress, January-March 2009(paper No. 550) authorized by **B. K. Banik**, **M. A. I. Chowdhury**, **M. S. K. A. Sarkar**,
- (37) “Effect of Arsenic Contaminated Irrigation Water on the Cultivation of Red Amaranth” published in American-Eurasian Journal of Scientific Research 4 (1): 14-19, 2009, ISSN 1818-6785 by IDOSI Publications, 2009 authorized by *M.D. Reza Qamran Choudhury, Shaikh Tasnuba Islam, Raquibul Alam, Ranjit Sen, G.M. Jahid Hasan and MD. Aktarul Islam Chowdhury.*
- (38) “**Social constraints before sanitation improvement in tea gardens of Sylhet, Bangladesh**” published in Environmental Monitoring Assessment on line 14<sup>th</sup> April, 2009 by Springer Publication authorized by M. Ahmed, Anawara Begum and **M.A.I. Chowdhury**.
- (39) “ **Traffic Accidents Scenario in Sylhet City**” published in “Journal of Environ. Sci. & Natural Resources. ISSN 1999-7361)” published by the Society of Conservation of Environment and Natural Resources (SCENR), Vol. 2, No.1, 163-166, 2008 authorized by **M. A. I. Chowdhury**, H. M.A. Mahzuz, S. B. Debnath and A.A.M. Ahmed.
- (40) “ **Socio-economic and Water Use Condition of Arsenic Affected Areas of North-Eastern Sylhet Region for Developing Alternatives of Contamination Free Water Supply**” published in “Journal of Environ. Sci. & Natural Resources. ISSN 1999-7361)” published by the Society of Conservation of Environment and Natural Resources (SCENR), Vol. 2, No.1, 115-120, 2008 authorized by M. Ahmed, **M. A. I. Chowdhury**, R. Alam, and S. Das Gupta.

**Paper Published/Accepted (on press) for presenting/publishing in Proceedings of International Conferences**

- (1) “**Traffic Management Schemes for Three Medium Sized Cities in Bangladesh**” presented in 7<sup>th</sup> International Conference on Development and Planning of the Urban Transport (CODATU-VII) held in New Delhi, India in February 1996 and published in the seminar proceeding authorized by Haque M.M. , Ahmed S. N. and **Chowdhury M. A. I.**
- (2) “**UfW Management Status in Bangladesh**”, presented in Water Hong Kong’96 Specialized Conference on Water Supply organized by International Water Supply Association (IWSA) and Hong Kong Water Supply Authority held in November 1996 and published in the seminar proceeding authorized by **Chowdhury M.A.I**, Ahmed M. F. Rahman M.H. and Bhuiyan M. A.B.
- (3) “**Traffic Management Study in Secondary Towns of Bangladesh**” presented in Biannual Conference of Institute of Engineers Bangladesh” held in December 13-15,

- 1996 in Dhaka, Bangladesh and consequently published in the conference proceeding authorized by Haque M.M. , Ahmed S. N. and **Chowdhury M. A. I.**
- (4) **“Control of UfW in Bangladesh”** presented in Biannual Conference of Institute of Engineers Bangladesh” held in December 13-15, 1996 in Dhaka, Bangladesh and consequently published in the conference proceeding authorized by **Chowdhury M.A.I.**, Ahmed M. F. Rahman M.H. and Bhuiyan M. A.B.
  - (5) **“Toxicity of Organochlorine Insecticides in Water Bodies of Bangladesh”** presented in CSCE-ASCE Environmental Engineering Conference held in Canada in September 15, 1997 and published in Conference proceeding authorized by Alam J.B., **Chowdhury M.A.I.** and Rahman M. H.
  - (6) **“Leak Detection in Medium Sized Cities of Bangladesh”** presented in Annual Conference of Institute of Engineers Bangladesh” held in January 18-20, 1998 in Rajshahi, Bangladesh and consequently and published in the seminar proceeding authorized by **Chowdhury M.A.I.**, Ahmed M. F. and Gaffer M.A.
  - (7) **“Water Supply in Rural Areas of Bangladesh”** presented in 20<sup>th</sup> Bangladesh Science Conference held in November 28-30, 1998 and consequently published in the conference proceeding authorized by **M A I Chowdhury** and M. Feroze Ahmed.
  - (8) **“Toxicity of Agro-chemicals in Water Bodies of Bangladesh”** presented in 20<sup>th</sup> Bangladesh Science Conference held in November 28-30, 1998 and consequently published in the conference proceeding authorized by Md. J. B. Alam, **Md. A. I. Chowdhury** and M. H. Rahman.
  - (9) **“World Water : In the Changing Environment”** presented in 20<sup>th</sup> Bangladesh Science Conference held in November 28-30, 1998 and consequently published in the conference proceeding authorized by Md. Sirajul Islam, **Mohammad A. I. Chowdhury** and Md. Moniruzzaman.
  - (10) **“Arsenic Contamination in Groundwater and its Hazardous Effect in Bangladesh”** presented in 20<sup>th</sup> Bangladesh Science Conference held in November 28-30, 1998 and consequently published in the conference proceeding authorized by **M. A. I. Chowdhury** and A. A. Biswas.
  - (11) **“Arsenic Pollution in Groundwater of Bangladesh”** presented in 20<sup>th</sup> Bangladesh Science Conference held in November 28-30, 1998 and consequently published in the conference proceeding authorized by **Moammad A. I. Chowdhury**, Kazi M. A. Sohel, Md. Abu Eusuf, Masum Ahmed Zaigirder, Md. Jahir Bin Alam, Md. Sirajul Islam, Md. Maniruzzaman and Nibedita Chowdhury.
  - (12) **“Thermally Stated urban Environmental Sanitation”** presented in the seminar organized by AEE, SUST, held in November 30 on the occasion of World Sanitation Day, 1997 and subsequently published in the proceedings Environmental Engineering -2, Special Issue authorized by Dr. M. A. Eusuf, J. B. Alam and **M. A. I. Chowdhury**.
  - (13) **“Environmental Education”** presented in seminar organized by AEE, SUST, held in November 30 on the occasion of World Sanitation Day, 1997 and subsequently published in the proceedings Environmental Engineering -2, Special Issue authorized by **M. A. I. Chowdhury**; J. B. Alam, K.M.A.Sohel, M.S. Islam, and Dr. M. A. Eusuf.
  - (14) **“Water System Leak Detection in Secondary Towns of Bangladesh”** presented INTEGRATING THE URBAN WATER CYCLE, 11<sup>TH</sup> IWSA – ASPAC CONFERENCE held in Sydney, Australia in November 02—05. 1998 organized by Australian Water Works Association and International Water Services Association (IWSA) and published in the seminar proceeding authorized by **Chowdhury M.A.I.**, Ahmed M. F. and Gaffer M.A.
  - (15) **“Drinking Water management in Sylhet, a leading medium sized city of**

- Bangladesh**", presented in 'Water Asia'1999' held in Delhi, India in January 20-25, 1999 and published in the seminar proceeding authorized by **Chowdhury M.A.I** and Ahmed M. F.
- (16) **"Municipal Waste Management in Bangladesh"** presented in National Conference on 'Prospects of Environmental Engineering in Bangladesh' organized by Civil and Environmental Engineering Department, SUST, Sylhet held in September 2001 and consequently published in the conference proceeding authorized by **Chowdhury M. A. I** , Ahmed M., Rahman and Saha G. C.
- (17) **"Assessment of the Impact of Municipal and Industrial Waste on River Water Quality around Dhaka City"** presented in Fourth Biennial Convention of American Association of Bangladeshi Engineers and Architects in Maryland, USA on October 12, 2002 and published in the conference proceedings authorized by Sohel K. M. A.; Ahmed M. F. and **Chowdhury M. A. I**.
- (18) **"A Study on Municipal Waste Water in Sylhet City"**, presented in 'Bangladesh Environment -2002' organized by Bangladesh Poribesh Andolon, BUET and Dhaka University held on December 19-21, 2002. authorized by R. Alam, **M. A.I. Chowdhury**, M. Ahmed, S. M. Siddiqui, and S. K. Nath.
- (19) **"Current Status of Water Quality of River Surma"**, presented in 'Bangladesh Environment -2002' organized by Bangladesh Poribesh Andolon, BUET and Dhaka University held on December 19-21, 2002. authorized by A. Hossain, **M. A.I. Chowdhury**, M. J. B. Alam, M. Z. Islam and K. M. A. Sohel.
- (20) **"Community Initiatives and Recycling in Dhaka"**, presented in 'Sustainable Environment Sanitation and Waste Services', 26<sup>th</sup> WEDC (Water, Energy and Development Centre, UK) Conference held in Kolkata (Calcutta), India in December 18-22, 2002 and published in the seminar proceeding authorized by **Chowdhury M.A.I.**, Rahman M. H., Saha G.C. and Rahman M.
- (21) **"Influence of Upstream Sediment on Arsenic Contamination of Groundwater in Bangladesh"** presented in International Symposium 'Fate of Arsenic in the Environment' organized by United Nations University, Japan and BUET held on February 05, 2003 and subsequently published in the proceeding of the Symposium authorized by **Chowdhury M.A.I**, Ahmed M. F. and M. Ashraf Ali.
- (22) **"Destroying Hills in the northeastern Bangladesh: Extent of the Problem and its Probable Impact"** presented in International Symposium on Environmental Management ISEM 2004 organized by Loughborough University, United Kingdom and BUET, Dhaka held on January 07-08, 2004 and subsequently published in the proceeding of the Symposium authorized by Islam M.S., Hasan G.M.J. and **Chowdhury M.A.I**.
- (23) *'Probable damage of water pipeline due to earthquake in Sylhet'- authorized by M. Ahmed, M.A. Ansary, **M.A.I. Chowdhury**, M.H. Rahman, K.A. Khan, published in the proceedings of the International conference '1<sup>st</sup> Bangladesh Earthquake Symposium -2005' organized by Bangladesh Earthquake Society, Dhaka, Bangladesh, 2005.*
- (24) **"Development of a model of sewage collection system for a small community"** presented in International Conference on Applied and Mathematical Physics Symposium organized by Bangladesh Mathematics Association and SUST held on January 04-07, 2005 and subsequently published in the proceeding of the conference authorized by Haque M.A., Ahmed M., **Chowdhury M.A.I**, Alam R., Afrin S. and .Nurun Nabi A.T.,M.



- (25) **“Arsenic Contamination in Groundwater – Bangladesh Perspective”** presented in International Conference on ‘Water and Waste Water Treatment’ under ‘Asia-Pro-Eco Program on Technology Partnership for Innovative Treatment of Drinking and Industrial Waste Water’ held on June 01-05, 2005 funded by European Union organized by Jiangsu Polytechnic University of China and subsequently published in the proceeding authorized by **Chowdhury M.A.I.**;
- (26) **“How does arsenic contamination causes public health and socio-economic base of Bangladesh?”** presented in International Workshop on ‘Water and Industrial Waste Water Management’ under ‘Asia-Pro-Eco Program on Technology Partnership for Innovative Treatment of Drinking and Industrial Waste Water’ jointly carried out by SUST of Bangladesh, University of Applied Sciences, Karlsruhe of Germany, University of Calabria of Italy and Jiangsu Polytechnic University of Peoples Republic of China funded by European Union held on October 03, 2005 organized by Shahjalal University of Science and Technology and subsequently published in the proceeding authorized by **M.A.I. Chowdhury, M.F. Ahmed, M.A. Ali, K.M.A. Sohel, M.A. Haque, S.K.A. Sarker, M.R. Alam, R. Sharmin and S. R. Chowdhury.**
- (27) **“Role of Homemade Pit-latrines in Sanitation Improvement of Rural Areas”** presented in International Symposium on Environmental Sustainability (ISES), 2006 Workshop held on February 7-9, 2006, organized by Bangladesh University of Engineering and Technology (BUET) and WEDC, UK and subsequently published in the proceeding authorized by **M.A.I. Chowdhury, M.R. Alam, and M.S. Islam.**
- (28) **“Solid Waste Management Status in Bangladesh”** presented in ‘Twenty-second International Conference on Solid Waste Technology and Management 2007’ held on March 18-21, 2007, organized by Department of Civil Engineering, Widener University, USA and subsequently published in the proceeding authorized by **M.A.I. Chowdhury, M.R. Alam, and H.M.A. Mahzuz.**
- (29) **“ Preservation of Forest and the Habitats of The Indigenous Region of Bangladesh”** presented in International Conference on “Indigenous People and Bangladesh Environment ‘2007” held on December 17-18, 2007 in Dhaka, Bangladesh organized by Bangladesh Paribesh Andolon (BAPA) and Bangladesh Environmental Network (BEN) in association with Civil and Environmental Engineering Department of Shahjalal University of Science and Technology (SUST), Sociology department of Dhaka University, Department of Anthropology of Jahangir Nagar University, department of Anthropology of Rajshahi University, Department of agricultural Chemistry of Bangladesh Agricultural University, Institute of Forestry and Environmental Sciences, and Environment Science Discipline of Khulna University and subsequently published in the proceedings authorized by H. M. A. Mahjuz and **Dr. Mohammad Aktarul Islam Chowdhury.**
- (30) **“ Water Supply and Sanitation Scenarios in the Indigenous Communities of Sylhet”** presented in International Conference on “Indigenous People and Bangladesh Environment ‘2007” held on December 17-18, 2007 in Dhaka, Bangladesh organized by Bangladesh Paribesh Andolon (BAPA) and Bangladesh Environmental Network (BEN) in association with Civil and Environmental Engineering Department of Shahjalal University of Science and Technology (SUST), Sociology department of Dhaka University, Department of Anthropology of Jahangir Nagar University, department of Anthropology of Rajshahi University, Department of agricultural Chemistry of Bangladesh Agricultural University, Institute of Forestry and Environmental Sciences, and Environment Science Discipline of Khulna University and

subsequently published in the proceedings authorized by Md. Azizul Hoque, Raquibul Alam, **Dr. Mohammad Aktarul Islam Chowdhury**, H.Muhammed Salim Uddin, Abu Sufian Milan, Urmee Jamal, H. M. A. Mahjuz and Sheik Md. Saleem.

- (31) **“ Socio-economic Aspects of Sanitation Improvement in Tea Garden of Sylhet City”** presented in International Conference on “Indigenous People and Bangladesh Environment ‘2007” held on December 17-18, 2007 in Dhaka, Bangladesh organized by Bangladesh Paribesh Andolon (BAPA) and Bangladesh Environmental Network (BEN) in association with Civil and Environmental Engineering Department of Shahjalal University of Science and Technology (SUST), Sociology department of Dhaka University, Department of Anthropology of Jahangir Nagar University, department of Anthropology of Rajshahi University, Department of agricultural Chemistry of Bangladesh Agricultural University, Institute of Forestry and Environmental Sciences, and Environment Science Discipline of Khulna University and subsequently published in the proceedings authorized by Dr. Mushtaq Ahmed, Anwara Begum and **M. A. I. Chowdhury**.
- (32) **“Integrated Solid Waste Management for Urban Centers”** presented in International Conference on Solid Waste Management Waste Safe organized by Civil Engineering Department of Khulna University of Engineering and Technology under the auspices of Waste Safe II, a project of EU-Asia Pro Eco Program of EC held in February 09 to 10, 2008 and subsequently published in the proceedings authorized by **M. A. I. Chowdhury**.
- (33) **“Solid Waste Management System of Sunamgang and Moulavibazar at North-eastern Part of Bangladesh”** presented in International Conference on Solid Waste Management Waste Safe organized by Civil Engineering Department of Khulna University of Engineering and Technology under the auspices of Waste Safe II, a project of EU-Asia Pro Eco Program of EC held in February 09 to 10, 2008 and subsequently published in the proceedings authorized by **M. A. I. Chowdhury**, R. Alam, E. Yusuf and R. K. Saha.
- (34) **“Feasibility Study of a Composting Plant in Sylhet City”** presented in International Conference on Solid Waste Management Waste Safe organized by Civil Engineering Department of Khulna University of Engineering and Technology under the auspices of Waste Safe II, a project of EU-Asia Pro Eco Program of EC held in February 09 to 10, 2008 and subsequently published in the proceedings authorized by S.R. Chowdhury, R. K. Chowdhury, H.M.A. Mahzuz, **M. A. I. Chowdhury**, R. Sharmin, S.B. Faruque and S. M. Saleem.
- (35) **“Practice of Open Dumping in Sylhet City Corporation”** presented in International Conference on Solid Waste Management Waste Safe organized by Civil Engineering Department of Khulna University of Engineering and Technology under the auspices of Waste Safe II, a project of EU-Asia Pro Eco Program of EC held in February 09 to 10, 2008 and subsequently published in the proceeding authorized by M.S.K. Sarker, B.K. Banik, **M. A. I. Chowdhury**, M. S. Islam and M.S. Muntaha.
- (36) **“Potentiality of Recycling and Reuse to Manage Solid Waste in Sylhet City”** presented in International Conference on Water Sanitation ‘WatSan Expo-2008’ organized by Water AID International held in March 05-06, 2008 and subsequently published in the proceeding authorized by **Mohammad Aktarul Islam Chowdhury**, Rezaul Kabir Chowdhury, Raquibul Alam, H.M.A. Mahzuz, Md. Saiful Islam, Abu Zubaer Mahbub, Ishrat Jahan and Md. Bashirul Haque.
- (37) ***“Bangladesh is in the Verge of Climate Change: What to be Done at the***

- Moment" authorized by M.A.I. Chowdhury, M. S. Islam and M.B. Haque presented in the Conference of Financing for Climate Change –Challenges and Way Forward 2008 held on 15-17 August 2008 in Dhaka, Bangladesh organized by Unnayan Onneshan The Innovators and subsequently published in the proceeding.*
- (38) *"How can Public-Private Partnership play significant role in Climate Action Financing in Bangladesh" authorized by M.A.I. Chowdhury, M. S. Islam, and M.B. Haque presented in the Conference of Financing for Climate Change – Challenges and Way Forward 2008 held on 15-17 August 2008 in Dhaka, Bangladesh organized by Unnayan Onneshan The Innovators and subsequently published in the proceeding.*
- (39) *"Technology and Knowledge Transfer to Minimize the Devastating Effects of Climate Change in Bangladesh" authorized by M.A.I. Chowdhury, M. S. Islam, and M.B. Haque has been presented in the Conference of Financing for Climate Change –Challenges and Way Forward 2008 held on 15-17 August 2008 in Dhaka, Bangladesh organized by Unnayan Onneshan The Innovators and subsequently published in the proceeding.*
- (40) **"Solid Waste Management in Sylhet City"** presented in 'Twenty-fourth International Conference on Solid Waste Technology and Management 2009' held on March 18-21, 2009, organized by Department of Civil Engineering, Widener University, USA and subsequently published in the proceeding authorized by **M.A.I. Chowdhury, M.R.Alam, and Md. Seleem.**
- (41) **"Ecological Engineering Looks for Eco-Village"** presented in the Bi-Annual Conference of the Institute of Engineers Bangladesh, Sylhet Centre on March 20, 2009 and subsequently published in the proceeding authorized by **M. A. I. Chowdhury.**
- (42) **"Sharing of Water of Trans-boundary Rivers Utilizing the Opportunities"** presented in the International Conference on Shared Water Shared Opportunities organized by Nature and Biodiversity Conservation Society on the eve of World Water Day 2009 on 22<sup>nd</sup> March 2009 and subsequently published in the proceeding authorized by **M. A. I. Chowdhury.**
- (43) **"Sustainable Green Environment of Urban Agglomeration needs what????? - INTEGRATED SOLID WASTE MANAGEMENT"** presented in "SARDINIA 2009" Twelfth International Waste Management and Landfill Symposium held in 5 - 9 October 2009 at *S. Margherita di Pula, Cagliari, Italy* and subsequently published in the conference proceedings authorized by **M. A. I. Chowdhury.**
- (44) **"R's in Solid Waste Stream"** presented in "SARDINIA 2009" Twelfth International Waste Management and Landfill Symposium held in 5 - 9 October 2009 at *S. Margherita di Pula, Cagliari, Italy* and subsequently published in the conference proceedings authorized by **M. A. I. Chowdhury.**
- (45) **"Role of R's in the Minimization of Solid Waste"** presented in International Conference on Solid Waste Management Waste Safe organized by Civil Engineering Department of Khulna University of Engineering and Technology under the auspices of Waste Safe II, a project of EU-Asia Pro Eco Program of EC held in November 09 to 10, 2009 and subsequently published in the conference proceedings authorized by **M. A. I. Chowdhury.**
- (46) **"Socio-economic Aspects of Solid Waste Management"** presented in International Conference on Solid Waste Management Waste Safe organized by Civil

Engineering Department of Khulna University of Engineering and Technology under the auspices of Waste Safe II, a project of EU-Asia Pro Eco Program of EC in November 09 to 10, 2009 and subsequently published in the conference proceedings authorized by **M. A. I. Chowdhury**.

- (47) **“Solid Waste Management Situation in Sylhet City”** presented in International Conference on Solid Waste Management Waste Safe organized by Civil Engineering Department of Khulna University of Engineering and Technology under the auspices of Waste Safe II, a project of EU-Asia Pro Eco Program of EC held in November 09 to 10, 2009 and subsequently published in the conference proceedings authorized by **M. A. I. Chowdhury**, R. Alam, S.M. Saleem and G.O. F. Hossaen.

#### **Poster Presented in International Conferences**

- (1) **“Study of Traffic Congestion in Sylhet City, Bangladesh”** presented in the ‘Meet – the Author’ in the Poster Session: 555 entitled ‘Urban Transport in Developing Countries’ in the Annual Meeting of Transportation Research Board organized by Transportation Research Board (TRB), USA held in January 15, 2008.
- (2) **“Arsenic Hazard in Bangladesh”** presented in Third International conference on Arsenic Exposure and Health Effects held in San Diego, California, USA, July 12-15, 1998 organized by the Society of Environmental Geochemistry and Health (SEGH) of USA.

#### **Papers Published in National Dailies and Weeklies:**

All around one hundred articles on environmental issues, science, education system and rural economy have been published in the Dailies and Weeklies and Fortnightlies of Bangladesh. Among them, a few important titles are mentioned below.

- (1)
- (2) Tipai mukh Band : Bangladesher Jainna Akh Voinkar Panee Biparjay (Tipaimukh Dam: A Devastating Water Deterioration for Bangladesh” in Sonarbangladesh published from London, UK.
- (3) Tipai mukhe Bandh : Bharater Ujane Manabsrishta ak Biparjhaykar Padakkeph (Dam at Tipaimukh: A man-made Devastating project in the Upstream of India) in the Ittefak on May 15, 2009 authorized by **M A I Chowdhury**.
- (4) **Arsenice Biparjashta Bangladesh (Bangladesh deteriorated by Arsenic)** in the Jajaidin on 25<sup>th</sup> June, 2008, authorized by Abul. Abrer Masrur Ahmed and **Dr. M A I Chowdhury**.
- (5) **Panee Jhakan Samaisha: Arsenice Biparjhasta Desh (When Water is Problem: The Country is endangered by Arsenic)** in the Sylheter Daak on 7<sup>th</sup> October 2007 authorized by Abul. Abrer Masrur Ahmed and **Dr. M A I Chowdhury**
- (6) **Panee Dushon Mahabipode Felbe Amader (Water pollution will lead us to a great danger)**, in the Jajaidin on 9<sup>th</sup> July 2007, authorized by **Dr. M A I Chowdhury** and Abul Abrer Masrur Ahmed.
- (7) **Global Warming and Triple Seven, in the Sylheter Daak on 7<sup>th</sup> July 2007, authorized by Abul. Abrer Masrur Ahmed and Dr. M A I Chowdhury.**

- (8) **Panee Jhakan Samaisha (When Water is Problem)** in the Sylheter Daak on 8<sup>th</sup> June 2007 authorized by Abul. Abrer Masrur Ahmed and **Dr. M A I Chowdhury**
- (9) **Daridra Durikarane Jalavumir Vumika** (“Role of Wetland in Poverty Alleviation” ), in the Prathom Alo on 5<sup>th</sup> February 2006 authorized by **M A I Chowdhury**.
- (10) **Can a University be Established for SAARC Countries?** in the Bangladesh Today on November 10, 2005 authorized by **M A I Chowdhury**,
- (11) **Sanitation Program in Bangladesh-how can it be achieved the millennium development goal by 2010?** in the Independent on December 05, 2004 authorized by **M A I Chowdhury**
- (12) **Environmental Education for Improving Environment** in the Bangladesh Observer on July 21, 2000 authorized by **M A I Chowdhury**
- (13) **Save the Endangered Earth in the Daily Star on September 16, 1998 on the occasion of the World Ozone Day** authorized by **M A I Chowdhury and Md Rezaul Kabir Chowdhury**
- (14) **Arsenic Hazard : Looming Disaster in the Independent on May 27, 1998** authorized by **M A I Chowdhury**.
- (15) **Noise Pollution and Human Beings** in the Bangladesh Observer on July 11, 1997 authorized by **M A I Chowdhury** and Sushanta Das Gupta
- (16) **Effects of Climatic Change on the Environment in the Independent on 10<sup>th</sup> April 1997** authorized by **M A I Chowdhury**.
- (17) **Acid Rain and Its Impact on the Environment in the Bangladesh Observer on December 16, 1996** authorized by **M A I Chowdhury and Md Rezaul Kabir Chowdhury**
- (18) **Gaser Bigghan Bittique Shilpa Shambhabana (Prospect of scientific industrialization of natural gas)** in the Inkilab on December 14, 1988 authorized by **M A I Chowdhury**
- (19) **Buet Khulche, chattarara kelassey nai (BUET is opened, Students are not in the class), Special feature** in the Weekly Ekhane Samoi authorized by Sikandar Faiz and **M A I Chowdhury (Sagar Choudhury)** on December 05-12, 1988.
- (20) **Chira saraney biraj hee saitta sundar (Oh truth beauty delighted for ever)** in the Dainik Dosh on November 05 and 12, 1988 authorized by **M A I Chowdhury**
- (21) **Prokoushal versiteer dui jugh (Two age of Engineering Versity)** in the Dainik Dosh on October 30, 1988 authorized by **M A I Chowdhury**
- (22) **Epil – epil samabhabanamoi aek ajab gach (Epil Epil – A wonderful prospective tree** in the Dainik Dosh on September 15, 1988 authorized by **M A I Chowdhury**
- (23) **Bueter bartaman sikkah paddatee (Existing education system of BUET)** in the Dainik Dosh on September 25, 1988 authorized by **M A I Chowdhury**
- (24) **Bangladeshe parjatan shilper babbisshat (Prospect of Tourism industry in Bangladesh)** in the Inkilab on May 08 and 09, 1988 authorized by **M A I Chowdhury**

- (25) **Bangladeshe Teel – samabhabanar aek natun diganta (Oil in Bangladesh – new horizon of prosperity)** in the weekly Raktaketu on May 04, 1988 authorized by **M A I Chowdhury**
- (26) **Biogas – Jhalaneer aek afuranta shambhabana (Biogas – a never ending source of fuel)** in the Dainik Dosh on March 19, 1988 authorized by **M A I Chowdhury**
- (27) **Sababhik juckti oo Bigganer nirikeh Miraj (Miraj – in the light natural argument and science)** in the Dainik Dosh on March 02, 1988 authorized by **M A I Chowdhury**
- (28) **Bangladesher Kromobikashman parjatan shilpa (Gradually Growing Tourism of Bangladesh)** in the Dainik Dosh on February 28 and 29, 1988 authorized by **M A I Chowdhury**
- (29) **Maiddamik oo uccha maiddamik parajaey ganit oo biggan sikkah (Study of mathematics and science in secondary and higher secondary education)** in the Dinkal on January 23 and 30, 1988 authorized by **M A I Chowdhury**
- (30) **Satabdir Sakkhi – Bueter atit, bartaman oo babhisshat ( Past, present and future of BUET)** in the Dainik Dosh on December 26, 1987 and January 02, 1988 authorized by **M A I Chowdhury**
- (31) **Kutir shilpey Bangladeshi lalanara (Bangladeshi women in cottage industries)** in the fortnightly Pratirodh on November 01, 1987 authorized by **M A I Chowdhury**
- (32) **Prativabikash upoghogee satikh sikkha bebasta chahi (Demand of proper education system fit for flourishing genius)** in the Dainik Dosh on October 10, 17 and 24, 1987 authorized by **M A I Chowdhury**
- (33) **Mashroom aek anainna sabjee (Mashroom – a unique vegetable)** in the fortnightly Pratirodh on October 01, 1987 authorized by **M A I Chowdhury**
- (34) **Manab Saivvatar Kaillane purakoushal (Civil Engineering in the welfare of human civilization)** in the Inkilab on May 17, 1987 authorized by **M A I Chowdhury**
- (35) **Gramunnayane gram pratirakkha daler vumika (The role of village defence party in the development of the villages)** in the fortnightly Pratirodh on December 25, 1986 authorized by **M A I Chowdhury**
- (36) **Ashir Dashaker Atanka AIDS (AIDS – the panic of the decade of the eighties)** in the Inkilab on December 05, 1986 authorized by **M A I Chowdhury**.
- (37) **Koraner Aloke Bighan Sadhana (Culture of Science in the light in Al-Kuran)** in the in the Inkilab on October 28,, 1986 authorized by **M A I Chowdhury**.

**PRESENTATION OF KEY NOTE PAPERS IN PLENARY SESSIONS OF INTERNATIONAL CONFERENCE AS THE KEY NOTE SPEAKER**

- (1) **“The Role of R’s to Minimize the Industrial Effluent for Cost-effective Management”** authorized by **M. A. I. Chowdhury** in the **Specialized Seminar of the Plenary Session** of International Exhibition on Pollution Control and Environmental

Management Technology as “Pollutech Bangladesh 2008 organized by Adroit Environment Consultants Ltd. from June 26 to 28, 2008 held in Bangladesh China Friendship Convention Centre, Dhaka.

- (2) **“Integrated Solid Waste Management for Urban Centers”** authorized by **M. A. I. Chowdhury** in the **Special Plenary Session** of International Conference on Solid Waste Management Waste Safe organized by Civil Engineering Department of Khulna University of Engineering and Technology under the auspices of Waste Safe II, a project of EU-Asia Pro Eco Program of EC held in February 09 to 10, 2008.
- (3) **“Environment Auditing in Industries”** authorized by **M. A. I. Chowdhury** in the Closing Plenary Session of on September 13, 2007 of International Conference and Fair on Effluent and Water Treatment Process ETP Fair 2007 organized by Department of Environment of Bangladesh Government from September 11 to 13, 2007 held in Bangladesh China Friendship Convention Centre, Dhaka.

#### **PRESENTATION OF KEY NOTE PAPERS IN THE ROUND TABLE TALK OF THE EXPERT GROUPS**

- (1) **“Tipaimukh dam- A threat to the Existence of Bangladesh”** presented in the round-table talk organized by Forum of Diploma Engineers, Bangladesh (FDEB) on September 08, 2009.
- (2) **“Tipai-mukh Dam – a Dangerous Threat to the Environment of Bangladesh”** presented in the round table talk for public representatives of City Corporations and Pourshavas in August 11, 2009 organized by Tipaimukh Bandh Pratirodh and Sylhet Rakkah Parishad.
- (3) **“Tipai-Mukh Dam – Environmental Effect and What to be done at the moment”** presented in roundtable talk Tipai-Mukh Sanglup- 1 organized by Centre for Democracy and Peace Study (CDPS) in VIP lounge of National Press Club on July 07, 2009.
- (4) **“Tipai-mukh Band : Threat to the Environment and life of North-eastern Bangladesh”** organized by NBCS on June 15, 2009 in Dhaka Press Club.
- (5) **“Tipaimukh Dam- a Man-made River Killing Project by Our Giant Neighbour India in the Up-stream”** presented in a national round-table talk organized by MUKTA-MANCHA on May 07, 2009 authorized by M A I Chowdhury.

#### **PRESENTATION OF KEY NOTE PAPERS IN NATIONAL AND SPECIALIZED SEMINAR AS THE KEY NOTE SPEAKER**

- (1) **“Publicity of Environmental and Social Effects of Tipaimukh Dam in the International Forum”** presented as a key Note Speech in a seminar organized by International Tipaimukh Dam Protection Committee in July 28, 2009.
- (2) **“Upstream to Downstream : wetlands Connect Us All”** on the occasion of World Wet Land Day 2009 in the National Press Club Convention Centre on February 02, 2009 organized by Nature and Biodiversity Conservation Society (NBCS).
- (3) **“Solid Waste Management in the Perspective of Chittagong City”** in a specialized seminar organized by Chittagong City Corporation at Chittagong on August 28, 2008.
- (4) **“Unaccounted for Water Management in the Perspective of Chittagong City”** in a specialized seminar organized by Chittagong Water Supply and Sewerage Authority

- (CWASA) on August 27, 2008.
- (5) **“Solid Waste Management in the Perspective of Sylhet City Corporation”** in a specialized seminar organized by Institute of Engineers Bangladesh (IEB) at Sylhet on August 22, 2008.
  - (6) **Role of Public-Private Partnership to Handle the Effects of Climate Change in Bangladesh** in the plenary session of held on 15-17 August 2008 in Dhaka, Bangladesh organized by **Unnayan Onneshan The Innovators** and subsequently published in the proceeding. **“Potentiality of Ecological Sanitation to Improve the Socio-economic, Health and Environmental Condition: Bangladesh Perspective”** on the occasion of World Environment Day 2008 in the Center for Integrated Rural Development for Asia Pacific Region (CIRDAP) on June 05, 2008 organized by Bangladesh Academy of Rural Development (BARD).
  - (7) **“Ecological Sanitation to Conserve Biodiversity of Agriculture for Food Security : Bangladesh Perspective”** on the occasion of World Biodiversity Day 2008 in the National Press Club Convention Centre on May 22, 2008 organized by Nature Conservation and Biodiversity Society.
  - (8) **“Arsenic Hazard in Groundwater of Bangladesh”** in a specialized seminar organized by Institute of Engineers Bangladesh (IEB) at Chittagong on May 06, 2008.
  - (9) **“Integrated Solid Waste Management in Urban Cities from the Perspective of Bangladesh”** in a specialized seminar organized by Institute of Engineers Bangladesh (IEB) at Chittagong on May 05, 2008.
  - (10) **“Healthy Wetlands, Healthy People”** on the occasion of World Wet Land Day 2008 in the National Press Club Convention Centre on February 02, 2008 organized by Nature and Biodiversity Conservation Society.
  - (11) **“Effects of Climate Change on Biodiversity-Bangladesh Perspective”** on the occasion of World Biodiversity Day 2007 in the National Press Club Convention Centre on May 22, 2007 organized by Nature and Biodiversity Conservation Society.
  - (12) **“Wetland and Fisheries in the Sustainable Development”** on the occasion of World Wet Land Day 2007 in the National Press Club Convention Centre on February 02, 2007 organized by Nature and Biodiversity Conservation Society.
  - (13) **“Advocacy on Water Sanitation: International, Bangladesh and Sylhet Perspective”** on the occasion of **World Sanitation Day** organized by WATER AID on November 30, 2006.
  - (14) **“Desert and Desertification, Don’t Desert Dryland”** on the occasion of World Environment Day 2006 organized by Bangladesh Environment Lawyers Association (BELA) on June 05, 2006.
  - (15) **“Effects of Climate Change on Wetland and Wet land Biodiversity - Bangladesh Perspective”** on the occasion of World Biodiversity Day 2007 in the National Press Club Convention Centre on May 22, 2006 organized by Nature and Biodiversity Conservation Society.
  - (16) **“Role of Wetland in Poverty Alleviation”** on the eve of World Wet Land Day 2006 in the National Press Club Convention Centre on February 02, 2006 organized by Nature Conservation and Biodiversity Society.
  - (17) **“Environment Issues in Sylhet”** on the occasion of World Environment Day 2005 organized by Bangladesh Environment Lawyers Association (BELA) on June 05, 2005.
  - (18) **“Water and Wastewater Treatment in Bangladesh”** in June, 1997 in Shah University Mini Auditorium organized by the Linkage Project “Appropriate Technology for



Waste Water Treatment” between Shahjalal University of Science & Technology (SUST) and Staffordshire University of UK financed by ODA (UK).

#### **MODERATOR OF THE EXPERT CONSULTATION WORKSHOPS/MEETINGS**

- (1) Moderatiing the expert session **"Finalization of Courses for Disaster Management for B.Sc. and M.Sc."** in the **"First Expert Consultation Workshop on Disaster Management Curriculum for graduate Studies in Bangladesh"** organized by the Comprehensive Disaster Management Program (CDMP) of the Ministry of Food and Disaster Management of the Government of Bangladesh held in RDA, Bogra on September, 10-11, 2008.
- (2) Moderatiing the expert session **"Finalization of Courses for Disaster Management for B.Sc. and M.Sc."** in the **"Second Expert Consultation Workshop on Disaster Management Curriculum for graduate Studies in Bangladesh"** organized by the Comprehensive Disaster Management Program (CDMP) of the Ministry of Food and Disaster Management of the Government of Bangladesh held in Patuakhali Science and Technology University, Patuakhali, on November, 11-12, 2008.
- (3) Moderatiing the expert session **"Finalization of Courses for Disaster Management for B.Sc. and M.Sc."** in the **"Third Expert Consultation Workshop on Disaster Management Curriculum for graduate Studies in Bangladesh"** organized by the Comprehensive Disaster Management Program (CDMP) of the Ministry of Food and Disaster Management of the Government of Bangladesh held in Khulna University, Khulna, on December 20-21, 2008.
- (4) Moderatiing the expert session **"Finalization of Courses for Disaster Management for B.Sc. and M.Sc."** in the **"Fourth Expert Consultation Workshop on Disaster Management Curriculum for graduate Studies in Bangladesh"** organized by the Comprehensive Disaster Management Program (CDMP) of the Ministry of Food and Disaster Management of the Government of Bangladesh held in Jahangirnagag University, Dhaka, on April 05-06, 2009.

#### **PANEL DISCUSSION ON THE SELECTED PRESENTED PAPERS OR TOPICS AS A DISCUSSANT IN NATIONAL/INTERNATIONAL SEMINAR, WORKSHOP AND PLANEARY SESSION OF THE CONFERENCE**

- (1) **"Rehabilitation & Corrosion Control of Pipeline"** in Water Hong Kong'96 Specialized Conference on Water Supply organized by International Water Supply Association (IWSA) and Hong Kong Water Supply Authority held in November 1996.
- (2) **"Third South Asia Water Forum General Assembly of Global Water Partnership (GWP)"** organized by GWP-South Asia held in Dhaka from July 13, 2004.
- (3) **"South Asian Consultation on River Linking Project"** organized by Bangladesh Peoples' Initiative and Bangladesh Environmental Lawyers Association (BELA) held in Dhaka in August 21, 2004.
- (4) **"Haor of Sylhet Region: Environment, Geology, and Bio-diversity"** organized by Bangladesh National Geographical Association and Shahjalal University of Science and Technology in January 05, 2008.

- (5) **“2<sup>nd</sup> Bangladesh Solid Waste Management Conference - 2008”** held in February 11, 2008 organized by Japan International Corporation Agency (JICA) and Dhaka City Corporation.
- (6) Consultation Workshop on **“Regional Centers of Expertise (RCE) on Education for Sustainable Development”** held in July 05, 2008 organized by Bangladesh Academy for Rural Development (BARD)
- (7) **“National Food Policy Capacity Strengthening Program (NFPCSP) Workshop on Research Support on the Food Policy: Review of Preliminary Findings”** held on July 7, 2008 organized by Food Planning and Monitoring Unit (FPMU) of the Ministry of Food and Disaster Management and the Food and Agriculture Organization (FAO) of the United Nations financed by European Commission (EC) and USAID.
- (8) **“Water Aggression of India”** the round talk held in July 21, 2009 organized by Sylhet bibhagh Unnayan Parishad”.
- (9) **“The Existence of Bangladesh is Under Threat”**, the round talk held in August 08, 2009 organized by Liberty Bangladesh.
- (10) **“Tipai Mukh Dam/Barrage: Overall Impacts on Bangladesh”** in the round-table talk held in September 05, 2009 organized by The Centre for Human Rights.
- (11) **“Tipaimukh Dam: Cause for a Regional Consensus”** in the round table talk held in September 09, 2009 organized by Global Bangla Foundation and Media Foundation.
- (12) **“A few Questions to the Sikkahniti”** in the round table talk as the Chief Guest held in September 05, 2009 organized by The Adarsha Shikkak Parishad.

#### **QUESTION MODERATION OF THE UNDERGRADUATE EXAMINATION OF PUBLIC UNIVERSITIES**

- (1) Moderating the Questions of M. Sc Final Examination of Environmental Science Discipline of Khulna University as the External Member on February 10 31, 2009.
- (2) Moderating the Questions of Fourth Year Second Semester Final Examination of B.Sc Course Environmental Science Discipline of Khulna University as the External Member on January 30, 2009.
- (3) Moderating the Questions of Third Year Second Semester Final Examination of Environmental Science Discipline of Khulna University as the External Member on January 31, 2009.
- (4) Moderating the Questions of Second Year Second Semester Final Examination of Environmental Science Discipline of Khulna University as the External Member on February 01, 2009.

#### **TEXT AND REFERENCE BOOKS**

- (1) Co-author of **“Development Studies”** published by Atlantic Publishers Ltd., Calcutta, India (on press)
- (2) **“ Environmental Sanitation and Public Health”** authorized by **M. A. I. Chowdhury**, M.A. Hooque, M. R. Alam and M.S. Islam and thoroughly revised and edited by **M. A. I. Chowdhury** suitable for the undergraduate and post graduate levels, A H Development Publishing House, Dhaka (on press)
- (3) **“Causes of Arsenic Contamination in Groundwater of Bangladesh”** authorized by **M. A. I. Chowdhury**, suitable for advanced and post graduate levels as well as for the professionals by A H Development Publishing House, Dhaka (on press).

- (4) **“Unaccounted for Water – System Leakage to Water Supply”** authorized by **M. A. I. Chowdhury**, suitable for advanced and post graduate levels as well as for the professionals by A H Development Publishing House, Dhaka (on press).
- (5) Manuscript of a basic text book on **“Solid Waste Management in the Perspective of Bangladesh and Developing Countries”** authorized by **M. A. I. Chowdhury** suitable for the undergraduate and post graduate levels as well as for the professionals has been accepted for publishing by A H Development Publishing House, Dhaka
- (6) Manuscript of a basic book on **“Water and Wastewater Management”** authorized by **M. A. I. Chowdhury**, M.A. Hooque, M. R. Alam and M.S. Islam and thoroughly revised and edited by **M. A. I. Chowdhury** suitable for the undergraduate and post graduate levels has been accepted for publishing by A H Development Publishing House, Dhaka
- (7) Manuscript of a basic book on **“Environmental Management”** authorized by **M. A. I. Chowdhury**, and M.S. Islam thoroughly revised and edited by **M. A. I. Chowdhury** suitable for the undergraduate and post graduate levels has been accepted for publishing by A H Development Publishing House, Dhaka
- (8) Manuscript of a basic book on **“Industrial Effluent Management”** authorized by **M. A. I. Chowdhury** suitable for the undergraduate and post graduate levels has been being ready for publication.
- (9) Manuscript of a basic book on **“Environment Impact Assessment – Theory and Practice”** authorized by **M. A. I. Chowdhury** suitable for the undergraduate and post graduate levels has been being ready for publication.
- (10) Manuscript of a reference book on **“Effects, Mitigation and Adaptation of Climate Change”** authorized by **M. A. I. Chowdhury** suitable for the undergraduate and post graduate levels has been being ready for publication.
- (11) Manuscript of a reference book on **“Seasonal and Flash Flood: Bangladesh Perspective”** authorized by **M. A. I. Chowdhury** suitable for the undergraduate and post graduate levels has been being ready for publication .
- (12) Manuscript of a reference book on **“Wetland and Wetland Management in Bangladesh”** authorized by **M. A. I. Chowdhury** suitable for the undergraduate and post graduate levels has been being ready for publication.

#### **INTERNATIONAL CONFERENCE ATTENDED**

- (1) International Conference on “Climate Change and Strategy for Adaptation” organized by University College London, UK and International Training Network (ITN) for Water and Waste Management - Bangladesh Centre located at BUET held on February 18-20, 2009 in BUET, Dhaka.
- (2) “Pollutech Bangladesh – 2008” organized by Adroit Environment Consultants Ltd. from June 26 to 28, 2008 held in Bangladesh China Friendship Convention Centre, Dhaka.
- (3) International Conference on “Solid Waste Management Waste Safe” organized by Civil Engineering Department of Khulna University of Engineering and Technology under the auspices of Waste Safe II, a project of EU-Asia Pro Eco Program of EC to be held in February 09 to 10, 2008.
- (4) International Conference on “Indigenous People (Adibashi oo Bangladesher Paribesh) and Bangladesh Environment” organized by Bangladesh Paribesh Andolon (Bangladesh Environment Movement BAPA) in Association with Shahjalal University of science and Technology, Dhaka University, Rajshahi University, Bangladesh Agricultural University, Chittagong University, Jahangirnagar University and Khulna University held in December 17 to 18, 2007 in Dhaka, Bangladesh.

- (5) International Conference and Fair on “Effluent and Water Treatment Process ETP Fair 2007” organized by Department of Environment of Bangladesh Government from September 11 to 13, 2007 held in Bangladesh China Friendship Convention Centre, Dhaka.
- (6) International Workshop on “Water and Industrial Waste Water Management” organized by the departments of “Chemical Engineering and Polymer Science” and “Civil and Environmental Engineering” of the School of Applied Sciences and Technology under the Partnership for Innovative Treatment of Drinking and Industrial Waste Water (INNOWA) under Asia Pro Eco Program funded by European Union on October 03, 2005.
- (7) “South Asian Consultation on River Linking Project” organized by Bangladesh Peoples’ Initiative and Bangladesh Environmental Lawyers Association (BELA) held in Dhaka from August 21-22, 2004.
- (8) “Third South Asia Water Forum General Assembly of Global Water Partnership (GWP)” organized by GWP-South Asia held in Dhaka from July 13-15, 2004;
- (9) International Symposium ‘Fate of Arsenic in the Environment’ organized by United Nations University, Japan and BUET held on February 05, 2003 in BUET, Dhaka;
- (10) ‘Bangladesh Environment -2002’ organized by Bangladesh Poribesh Andolon, BUET and Dhaka University held on December 19-21, 2002;
- (11) ‘Sustainable Environment Sanitation and Waste Services, 26<sup>th</sup> WEDC (Water, Energy and Development Centre, UK) Conference held in Kolkata (Calcutta), India in December 15-17, 2002;
- (12) 26<sup>th</sup> International Conference: Water, Sanitation and Hygiene’2000, Organized by Water Engineering and Development Centre (WEDC) of UK and International Training Network (ITN) for Water and Waste Management - Bangladesh Centre located at BUET held on November 5-8, 2000 in Dhaka;
- (13) International Conference on Bangladesh Environment’2000 organized by BUET and Bangladesh Paribesh Andolon held on January 14-15, 2000 in Dhaka;
- (14) Water Asia’1999’ held in Delhi, India in January 20-25, 1999;
- (15) ‘INTEGRATING THE URBAN WATER CYCLE, 11<sup>TH</sup> IWSA – ASPAC CONFERENCE held in Sydney, Australia in November 02—05. 1998 organized by Australian Water Works Association and International Water Services Association (IWSA);
- (16) Third International conference on “Arsenic Exposure and Health Effects” held in San Diego, California, USA, July 12-15, 1998 organized by the Society of Environmental Geochemistry and Health (SEGH) of USA;
- (17) CSCE-ASCE Environmental Engineering Conference held in Canada in September 15, 1997,
- (18) Water Hong Kong `96, 10<sup>th</sup> ASPAC-IWSA Regional Conference organized by IWSA held in Hong Kong from 11<sup>th</sup> to 15<sup>th</sup> November, 1996;
- (19) 7<sup>th</sup> International Conference on Development and Planning of the Urban Transport (CODATU-VII) held in New Delhi, India in February 1996;
- (20) World Water Congress organized by International Water Association IWSA held in Madrid, Spain from October 15 to 19, 1995;
- (21) International Symposium on Environmental Impact Assessment on Water Management organized by International Group of Environment held in Bruges, Belgium from 15<sup>th</sup> to 17<sup>th</sup> of May 1995;
- (22) International conference on rehabilitation of service pipes (Lead pipes) organized by IWSA and Society of Trenchless Technology in Antwerpen Belgium from March 22<sup>nd</sup> to 23<sup>rd</sup>, 1995;

## SPECIALIZATION

Arsenic Contamination, Non Revenue Water management; Ecological Engineering and Eco-technology; Water and Waste Water Treatment and Management, Industrial Waste and Wastewater Treatment and Management, Water Quality Monitoring and Management; Drinking Water Management, Environmental Sanitation and Solid Waste Management; Environmental (Air Pollution, Noise pollution and Hazardous pollution) Pollution Monitoring and Control; Environmental Impact Assessment; Environmental Management, Environmental Planning, Environmental Auditing, Development of Urban Environment, and Traffic Management.

#### **FIELD OF INTEREST CURRENTLY**

Climate Change, Disaster Management, Arsenic Contamination, Environmental (Water, air, noise, soil) Quality Monitoring and Control, Eco-technology, Wastewater Management; Industrial Effluent Management, Drinking Water Management, Environmental Sanitation and Solid Waste Management; Environmental Impact Assessment; Environmental Planning, Management and Auditing, Integrated Environmental Management for Sustainable Development.

#### **MEMBERSHIP OF PROFESSIONAL BODIES**

- (1) Member of International Water Association (MIWA) and the then International Water Supply/Services Association (MIWA) since 1995
- (2) Life Fellow (F/5549) of the Institute of Engineers, Bangladesh (FIEB) since 1993.
- (3) Member of the Founding Executive Committee and Current Executive Committee of Society of Conservation of Environment and Natural Resources (SCENR), Bangladesh.
- (4) Executive Member of Institute of Environmental Professionals, Bangladesh.
- (5) Executive Member of Bangladesh Association for Environment Development.
- (6) Council Member, The Institute of Engineers, Bangladesh, Sylhet Centre since 2005

#### **REVIEWING INTERNATIONAL TECHNICAL JOURNALS**

- (1) Peer reviewed technical papers for Research Journal 'Environmental Monitoring and Assessment' ISSN:0273-1223) ' of IWA published by Springer Publication Ltd.
- (2) Peer reviewed technical papers for Water Research Journal 'Water Science and Technology (ISSN:0273-1223) ' of IWA published by Elsevier Publication Ltd.
- (3) Peer reviewed technical papers for Research Journal 'Water Supply (ISSN: 1606 – 9749)' of IWA published by Blackwell Science Ltd.
- (4) Member of Peer Review Committee of Environmental Science formed by Ministry of Science and Information Technology of Peoples Republic of Bangladesh nominated by the Vice-Chancellor of Shah Jalal University of Science and Technology, Sylhet.

#### **EDITORIAL BODIES OF THE JOURNALS**

- (1) Member of the Editorial Board of SUST Studies, Technical and Scientific Journal (ISSN 1682-895X) published by Shah Jalal University of Science and Technology, Sylhet since July 2004 to June 2009.
- (2) Member of the Editorial Board of "Bangladesh Journal of Environmental Science (ISSN 1561-9206)" published by Bangladesh Association for Environmental Development since 2009.
- (3) Member of the Editorial Board of "Environ. Sci. & Natural Resources. ISSN 1999-7361" since 2009.

#### **INTERNATIONAL/INTERUNIVERSITY LINKAGE/COLLABORATION PROJECT WITH ABROAD**

- (1) Working as Head of Shahjalal University of Science and Technology Sub-centre of International Training Network (ITN) for Water and Waste Management wided in 18 developing countries of Asia, Africa & Latin America funded DANIDA/UNDP/ World Bank from June, 2003 to August, 2008.
- (2) Working as Deputy Task Leader and Key Expert in 'Asia-Pro-Eco Program on Technology Partnership for Innovative Treatment of Drinking and Industrial Waste Water' funded by European Union jointly carried out by SUST of Bangladesh, University of Applied Sciences, Karlsruhe of Germany, University of Calabria of Italy and Jiangsu Polytechnic University of Peoples Republic of China from April 2005 to April 2007.
- (3) Working as the Member in the Steering Committee of International Joint Research Project 'Asia-Pro-Eco Program on Technology Partnership for Innovative Treatment of Drinking and Industrial Waste Water' nominated by Vice-Chancellor of SUST and approved by the Syndicate of SUST;
- (4) Active Participation in United Nations University, Tokyo, Japan - BUET Research Collaboration Project on 'Development of Low Cost Technologies for Removal of Arsenic from Groundwater' as a Researcher from 2000 to 2001.
- (5) Active Participation in MIT (USA) - BUET Link research project on 'Modeling Mobilization and Transport of Arsenic in the Subsurface' as a researcher from 1999 to 2000.
- (6) Participation in Joint Research Project entitled "Arsenic Contamination of Groundwater in Bangladesh Case Study of Samta Village" funded by Toyota Foundation and conducted by by Asia Arsenic Network AAN, Research Group of Applied Geology of Miazaki University of Japan, AAN, with the assistance of National Institute of Preventive and Social Medicine NIPSOM of Bangladesh, Rajshahi University, Bangladesh University of Engineering and Technology and Shahjalal University of Science and Technology in 1997 - 1998.
- (7) Working as Co-ordinate of Shahjalal University Sub-centre of International Training Network (ITN) for Water and Waste Management wided in 18 developing countries of Asia, Africa & Latin America funded DANIDA/UNDP/ World Bank from December 1996 to November 1998;
- (8) Working as Deputy Link Coordinator/Acting Link Coordinator and Waste Water Treatment Specialist in Linkage Project "Appropriate Technology for Waste Water Treatment" between Shahjalal University of Science & Technology (SUST) and Staffordshire University of UK financed by ODA (UK) from November 1996 to December 1997.

#### **RESPONSIBILITY IN INTERNATIONAL FORUM**

- (1) Member, Distribution Division (Operation and Maintenance Committee) of International Water Supply Association (IWSA) since September 1995. Attended Division Meetings (in Madrid 1995 & in Hong Kong in November 1996) and took active participation in the activities of division;
- (2) Member of the Task Force for Unaccounted for Water of International Water Supply Association (IWSA) for the session 1996-1997;
- (3) Chairperson, Technical Session, Water Hong Kong 96, 10<sup>th</sup> ASPAC-IWSA Regional conference organized by IWSA held in Hong Kong from November 11-15, 1996;
- (4) First Coordinator, International Training Network (ITN) for Water & Waste management Subcentre at Shah Jalal University of Science & Technology, Sylhet wided in 18 Developing countries of Asia, Africa and Latin America from December 1996 to November 1998.

- (5) Board Member, International Training Network (ITN) for Water & Waste Management wided in 18 developing countries of Asia, Africa and Latin America in the session 1997-1998 and 2002-2003.
- (6) External Reviewer of Lund University of Sweden (Look to Wavesite:www.sasnet.lu.se/aktarul.pdf)

### **KEY RESPONSIBILITY IN ORGANIZING INTERNATIONAL CONFERENCES**

- (1) Member of the Advisory Committee of International Conference on Solid Waste Management Waste Safe organized by Civil Engineering Department of Khulna University of Engineering and Technology under the auspices of Waste Safe II, a project of EU-Asia Pro Eco Program of EC to be held in February 09 to 10, 2008.
- (2) Member of the Organizing Committee and the Technical Committee of the International Conference on Indigenous People (Adibashi oo Bangladesher Paribesh) and Bangladesh Environment organized by Bangladesh Paribesh Andolon (Bangladesh Environment Movement BAPA) in Association with Shahjalal University of science and Technology, Dhaka University, Rajshahi University, Bangladesh Agricultural University, Chittagong University, Jahangirnagar University and Khulna University held in December 17 to 18, 2007 in Dhaka, Bangladesh.

### **MEMBER OF NATIONAL TECHNICAL ADVISORY GROUPS (TAGs) AND NATIONAL EXPERT COMMITTIES OF THE PEOPLES REPUBLIC OF BANGLADESH**

- (1) Member of the Technical Advisor Group (TAG) of the Comprehensive Management Program of the Ministry of Food and Disaster Management of the Peoples Republic of Bangladesh from September 11, 2008 to date.
- (2) Expert member of National Committee for investigating the post effects of exploration in the Magurcharra Gas Field formed by the Department of Forest under the Ministry of Forest (Sylhet Zone) in 1997;

### **CHAIRMAN/CO-CHAIRMAN OF THE TECHNICAL SESSIONS OF THE INTERNATIONAL CONFERENCES**

- (1) Chairman of the technical session of International Conference on Solid Waste Management Waste Safe organized by Civil Engineering Department of Khulna University of Engineering and Technology under the auspices of Waste Safe II, a project of EU-Asia Pro Eco Program of EC to be held in February 09 to 10, 2008.
- (2) Co-Chairman of the technical session of the International Conference on Indigenous People (Adibashi oo Bangladesher Paribesh) and Bangladesh Environment organized by Bangladesh Paribesh Andolon (Bangladesh Environment Movement BAPA) in Association with Shahjalal University of science and Technology, Dhaka University, Rajshahi University, Bangladesh Agricultural University, Chittagong University, Jahangirnagar University and Khulna University held in December 17 to 18, 2007 in Dhaka, Bangladesh.
- (3) Chairman of the technical session of Water Hong Kong'96 Specialized Conference on Water Supply organized by International Water Supply Association (IWSA) and Hong Kong Water Supply Authority held in November 1996.

### **INVOLVEMENT IN INTERNATIONAL ENVIRONMENTAL COMMITTEE**

- (1) Chairman of the Steering Committee of Surma River Area Water Partnership (SRAWP) under the auspices of Global Water Partnership from August 2003, to date.

- (2)) Member, Distribution Division (Operation and Maintenance Committee) of International Water Supply Association (IWSA) since September 1995;
- (3) Member of the Task Force for Unaccounted for Water of International Water Supply Association (IWSA) for the session 1996-1997;

### **COORDINATION OF LINKAGE PROJECTS OF MINISTRIES**

Coordinator of linkage Program between Shahjalal University of Science and Technology and the Ministry of Food and Disaster Management of the People Republic of Bangladesh - Comprehensive Disaster Management Program (CDMP) for knowledge and Resource Sharing on Disaster Management Issues November 2008 to date.

### **SUPERVISION AND REVIEW OF GRADUATE THESIS**

Currently supervising a number of M.Sc. Engineering thesis (4 thesis at the moment) in the field of Civil and Environmental Engineering

### **SUPERVISION AND REVIEW OF UNDERGRADUATE THESIS**

Supervised and reviewed around 100 undergraduate thesis in the field of civil and environmental engineering as the supervisor and external reviewer. Among them the title of the selected undergraduate thesis in the field of environmental engineering are cited below.

### **Quality and Treatment of Water and Wastewater**

- (1) Assessment of the efficiency of the existing wastewater treatment facilities of Osmani Medical College Hospital, Sylhet
- (2) A study on the optimization of different types of coagulants to reduce Chemical Oxygen demand (COD) of textile wastewater.
- (3) A study on dispersivity of arsenic through cohesionless soil
- (4) Removal of arsenic (III) from water by using iron-coated Sylhet Sand
- (5) A study on the removal of iron (of the content of 18 mg/l) from groundwater of Sylhet city using aeration and coagulation.
- (6) A study on the treatment of surface water of Haor areas of Sylhet region.
- (7) A study on textile and dyeing waste removal and treatment
- (8) A study on treatment of tannery waste water
- (9) A study on removal of iron (of the content of 11 mg/l) from groundwater of Sylhet city using aeration, coagulation and roughing filtration.
- (10) A study on the effectiveness of iron rich Sylhet sand in removing arsenic from groundwater.
- (11) Development of arsenic field kit to test arsenic concentration in the groundwater extracted from tubewell in the field.
- (12) Study of the sedimentation, coagulation and filtration to treat river waters in and around Dhaka city
- (13) Design, development and study of roughing filtration followed by aeration and sedimentation to remove high iron concentration > 10 mg/l in the groundwater of Sylhet city
- (14) Study and treatment of municipal waste water of Sylhet City
- (15) Construction, installation and performance study of a pilot trickling filter
- (16) Study of conventional wastewater treatment options including trickling filter to treat paper mill waste
- (17) Design and study of treatment facilities to treat domestic wastewater



- (18) Development and study of pond sand filter (PSF) to supply drinking water in coastal belt of Bangladesh.

### **Environmental Quality**

- (1) Characterization of the river Surma and its potentiality as a source of water
- (2) Water quality deterioration of the river Surma and its causes
- (3) Study of the quality of surface water of five rivers around Dhaka city
- (4) Water quality deterioration of the river Surma and its causes
- (5) Water Quality of Chatla Beel in Hakaluki Haor and its low cost treatment for drinking purpose
- (6) Statistical analysis of rainfall data and optimization of rain gauge stations for Sylhet city Corporation.

### **Environmental Impact Assessment**

- (1) Socio-economic and environmental impact of flood 2004 in the northeastern part of Dhaka City
- (2) An assessment of the impact of devastating gas exploration in Magurchara Gas Field on surrounding environment .
- (3) Environmental impact assessment on rural electrification under Sylhet Palli Bidyut Samity (1 and 2)
- (4) Study of environmental impact of bank protection works of the river Surma
- (5) Environmental impact assessment of Meghna-Dhonogoda Embankment project
- (6) Environmental and geotechnical aspects of Chapti Haor sub-project and its proposed rehabilitation.

### **Environmental Pollution**

- (1) A pilot study on effect of municipal wastewater on property of soil due to the migration of contaminants through diffusion
- (2) A study of seasonal variation of NO<sub>2</sub> concentration of Sylhet city
- (3) An study for assessing the air pollution scenario in Sylhet city
- (4) A study of noise pollution in vulnerable sites of Sylhet city
- (5) An study for assessment of noise pollution in vulnerable hospital sites of Sylhet city
- (6) A study on air pollution of Sylhet city
- (7) Study of lead pollution in two cities of Bangladesh
- (8) An study on Nitrate –Nitrogen (NO<sub>3</sub><sup>-</sup> N) transport phenomena in saturated disturbed soil samples of Sylhet Sadar Upazilla
- (9) Effect of salinity rise on Sundarban's species diversity
- (10) Low and intermediate level radioactive waste management
- (11) Study of noise pollution in a few selected school and college campus of Sylhet city.

### **Water Supply System**

- (1) Potentiality of rainwater harvesting system in slum areas of Sylhet City
- (2) Study on effect of iron in the groundwater to the water supply of Sylhet City from the view of socio-economic and health aspect
- (3) Proposed water supply system for a small community – a case study of SUST Campus
- (4) Estimation of earthquake damage of water pipeline in Sylhet city
- (5) Water system loss estimation and leakage control study in Sylhet city
- (6) Feasibility of rainwater harvesting for community water supply.

### **Solid Waste Management**

- (1) Solid waste management of Kathmandu Metropolitan city of Nepal
- (2) Optimization of domestic solid waste recycling : A case study of Sylhet city
- (3) A study on dumping of solid waste at Lalmati dumping site of Sylhet city
- (4) Feasibility study of the proposed composting plant in Sylhet city.
- (5) Comparative study of solid waste management system of Moulavibazar and Sunangang Paurashava.
- (6) Study of solid waste management system of Sylhet city.

### **Environmental Sanitation**

- (1) A study on water supply and sanitation condition of education establishment of Sylhet city.
- (2) Environmental sanitation of selected slum areas of Sylhet city
- (3) An assessment of existing environmental condition of selected markets in Sylhet city and development of a model market
- (4) An assessment of environmental and structural condition of some selected markets of Sylhet and design a two-storied model market
- (5) Sanitation improvement in rural areas of Bangladesh.

### **Management of Traffic Environment and Road safety**

- (1) Development of an urban transport model using the existing traffic condition of Sylhet City
- (2) Road accident analysis in Sylhet District
- (3) Assessment of existing traffic management system of Sylhet City.
- (4) Study of traffic congestion in the selected busy roads of Sylhet city.
- (5) A assessment of traffic congestion in and around Sylhet city and development of a mathematical model
- (6) Study of road accident and hazardous road of Sylhet city
- (7) Evaluation of traffic congestion in Sylhet city and development of a mathematical model
- (8) Study of the traffic facilities on Ambarkhana to Bandarbazar road under Sylhet city corporation

### **LECTURE NOTES FOR UNDERGRADUATE COURSES**

- (1) Ecology and Introduction to Environmental Engineering
- (2) Water Supply Engineering
- (3) Wastewater Engineering and Sludge Management
- (4) Environmental Sanitation
- (5) Air Pollution and Noise Pollution
- (6) Environmental Microbiology
- (7) Industrial Waste and Wastewater Treatment and Management
- (8) Environmental Impact Assessment
- (9) Environmental Management and Auditing
- (10) Urban Environmental Engineering
- (11) Socio-economic Aspects of Environment Engineering
- (12) Economics for Engineers
- (13) Hazardous and Radioactive Pollution
- (14) Design of Surface Water Treatment Plant
- (15) Design of Waste Water Treatment Plant

- (16) Theory of Water Treatment
- (17) Theory of Wastewater Treatment

### **THESIS, SPECIAL RESEARCH WORK/REPORT, REPORTS AND TRAINING COURSE MATERIALS**

**Training and course materials as well as specific research reports and research and technical proposals were prepared in different occasions. A few important of them are:**

- (1) UfW- the Most Sensitive Issue of Water Supply Sector of Dhaka City. (40 A Pages), Special Research Work for Employer, published by Chowdhury publication; January 1992, Dhaka Bangladesh;
- (2) Unaccounted Water Study (100 Pages), Personal Research Work, published by Chowdhury Publication; July 1993, Dhaka;
- (3) Unaccounted Water – the Most Concerning Issue of Water Supply Sector in Developing Countries (90 A size pages), Sept. 1994 Individual Research Report for partial fulfillment of Post Graduate Diploma in Sanitary Engineering, IHE, Delft, Holland;
- (4) Unaccounted Water Management Model for Developing Countries (230 pages) – M. Sc. Thesis in 1995.
- (5) Sullage and Storm Water Management, a 80 page participators note for training course for sector professionals on water Supply and Waste Management for ITN, Bangladesh in 1997;
- (6) Pre-treatment and Secondary Treatment, 50 page preparatory research report for PhD program in Environmental Engineering Division under Civil Engineering Department of BUET in February 1999;
- (7) Arsenic, Iron and Manganese in Water, 45 page preparatory research report for PhD program in Environmental Engineering Division under Civil Engineering Department of BUET in April 1999.
- (8) Solid Waste Management in Bangladesh, 70 page preparatory research report for PhD program in Environmental Engineering Division under Civil Engineering Department of BUET in September 1999.
- (9) Research proposal for on Technology Partnership for Innovative Treatment of Drinking and Industrial Waste Water' 'INNOWA project under Asia Pro Eco Program' 2003 which was properly evaluated by EU and the project was awarded and accomplished from May, 2005 to April, 2007 jointly carried out by SUST of Bangladesh, University of Applied Sciences, Karlsruhe of Germany, University of Calabria of Italy and Jiangsu Polytechnic University of Peoples Republic of China funded by European Union submitted to the European Commission; .
- (10) "Arsenic Contamination in Groundwater of Bangladesh" 100-page course material for a specialized course on 'Arsenic Pollution" organized for multi-professionals in 2005;
- (11) "Major Environmental Issues in Sylhet Region" 80-page course material for a specialized course organized for multi-professionals by 'Bangladesh Environmental Lawyers Association' in 2004.
- (12) "Role of Gender in Water Supply Sanitation Sector" 35-page course material for a specialized course on 'Water Supply Sanitation' organized for multi-professionals by Shahjalal University Sub-centre of International Training Network (ITN) for Water and Waste Management in 2004.

- (13) “Participatory Management and Planning in Water Supply and Sanitation Sector” 25-page course material for a specialized course on ‘Water Supply Sanitation’ organized for professionals by Shahjalal University Sub-centre of International Training Network (ITN) for Water and Waste Management in 2005.
- (14) “Identification of Causes of Arsenic Contamination in Groundwater of Bangladesh”, PhD theses submitted to Environmental Engineering Division of Civil Engineering Department of Bangladesh University of Engineering and Technology in 2006,
- (15) “Solid Waste Management in Sylhet City” 30-page course material for a specialized course on ‘Water Supply Sanitation’ organized by Shahjalal University Sub-centre of International Training Network (ITN) for Water and Waste Management in 2007.

#### **PROFESSIONAL REPORTS & PROPOSALS**

- (1) IEE Report of Madina Garden City project executed by Centre for Research, Testing and Consultancy of Civil and Environmental Engineering Department of Shah Jalal University of Science and Technology in 2007-2008.
- (2) Special report on Installation of Surface Box for Protection of Gate Valves; Leak Detection and Waste Prevention Program of Dhaka Water Supply and Sewerage Authority (DWASA);
- (3) Draft final report and final report of Leak Detection and Waste Prevention Program of DWASA;
- (4) Draft final and final report of Water System Leak Detection Component of Secondary Towns Infrastructure Development Project-I of LGED for Sylhet, Pabna, Kushtia and Cox’s Bazar Pourashavas;
- (5) Draft final and final report of Traffic Management Study Component of Secondary Towns Infrastructure Development Project-I of LGED for Sylhet, Mymanshing and Bogra Pourashavas;
- (6) Preparation of different project reports in Dhaka Urban Infrastructure Improvement Project (DUIP) of DWASA;
- (7) Preparation of tender documents & tender evaluation reports on “Procurement of Vehicles”, “Well Screen and Casing Pipes”, Chlorination Equipment” “Procurement of Pumps and Electric Appurtenances for Water Supply”, “Sewage Disposal Equipment and Vehicles” and “Construction of Pipe Lines for Water Supply and Sewerage Lines” etc. in DUIP Project,
- (8) Preparation of Progress reports in “DWASA Consumer Survey” Project;
- (9) Preparation of Technical Proposal for Chittagong WASA Unaccounted Water Management Study;
- (10) Preparation of Technical Proposal for Sanitation Management of Dhaka WASA and
- (11) Preparation of Technical Proposal for Secondary Towns Infrastructure Development Project - II of LGED,

#### **CONSULTANCY WORK CUM RESEARCH PROJECTS OF CRTS, SUST**

- (1) Project Head and EIA Expert of Environmental Impact Assessment of Madina Garden City executed by Centre for Research, Testing and Consultancy of Civil and Environmental Engineering Department of Shah Jalal University of Science and Technology in 2007-2008.
- (2) Project Head and Team Leader of Gazi Burhanuddin City, a model urban planning and housing project of a worth of 2.5 million taka (50 thousand US \$) executed by Centre for Research, Testing and Consultancy of Civil and Environmental Engineering Department of

Shah Jalal University of Science and Technology since 2006 to date.

- (3) Project Head of Madina Garden City, a model urban planning and housing project located in Sylhet city of a worth of 1.5 million taka (30 thousand US \$) executed by Centre for Research, Testing and Consultancy of Civil and Environmental Engineering Department of Shah Jalal University of Science and Technology in 2006-2008.
- (4) Project Head and Team Leader of Design and Construction of Iron Removal Plant by Roughing Filtration for removing iron of concentration in excess of 11 mg/l in Hotel Asma International Hotel Compound located in Sylhet City of a worth of 0.1 million taka (2 thousand US \$) executed by Centre for Research, Testing and Consultancy of Civil and Environmental Engineering Department of Shah Jalal University of Science and Technology in 2005.

#### **INTERVIEWS WITH ELECTRONIC AND PRINT MEDIA ON ENVIRONMENTAL ISSUES**

- (i) More than a score of Interviews on environmental issues (Urbanization, Hill cutting in Sylhet city, earthquake, biodiversity, wet land, Tengra teela explosion, Magurchara gas explosion, Tipaimuk bandh, Farakkah issues, other transboundary river and water issues, desertification, deteriorated soil condition of tea garden, deteriorated water quality of Surma river, arsenic problem, unplanned urabinization, unplanned stone exploration in and near Sylhet city etc.) with **ALJAZEERA (on August 05, 2009)** and more than once in each of different Bangladeshi Channels like the Bangladesh Television and other popular TV Channels such as NTV News, Channel -I, CSB News, One News, RTV News, Dignta TV, ETV etc.
- (ii) More than a score of Interviews on environmental issues (Degrading fertility of tea gardens due to loss of organic contents severely, Hill cutting, Urbanization, Loss of biodiversity, wet land, Tengra teela explosion, Magurchara explosion, Unautjorised occupation of haors in Sylhet region, Tipaimuk bandh, Farakkah and desertification, sanitation in tea gardens, sanitation in wetlands, deteriorated soil condition of tea garden etc.) with the newspapers the Daily Ittefaq, the Daily Amar Desh, the Naya Diganta, the Daily Jugantar, the Daily Jai Jai Din, the Daily Ajker Kagoch, the Daily Bhorer Kagoch, the Daily Samakal, the Daily Dinkal, the Daily Dainik Desh, the Daily Inkilab, the Daily Sylheter Dak, Weekly Bishabiddalay Campus etc..

#### **RADIO PROGRAMME**

Presentation in “Nature & Environmental Pollution” Magazine Programme as well as in the special programs on the eve of different International Days like “22<sup>nd</sup> March, World Water Day”, “5<sup>th</sup> June, World Environment Day”, “16<sup>th</sup> September, World Ozone Day”, “30<sup>th</sup> November, World Sanitation Day”, National Tyree Plantation Program etc. broadcasted by Radio Bangladesh and Bangladesh Betar, Sylhet Centre from time to time. A few of the presentations broadcasted are cited below.

- “Air pollution and its remedy” broadcasted on 04.09.96
- “Significance of International Ozone Day” broadcasted on 16.09.96
- “Water pollution and its minimization” broadcasted on 02.10.96
- “Importance of International Sanitation Day” broadcasted on 21.12.96.
- “Significance of World Environment Day” broadcasted on 05.06.97.
- “Role of trees in protecting environment” broadcasted on 17.07.97.
- “Importance of World Ozone Day” broadcasted on 16.09.97.

- “Significance of World Sanitation Day” broadcasted on 30.11.97.
- “Significance of World Water Day” broadcasted on 22.03.98.
- “Tree and Environment” broadcasted on 08.08.98.
- “Significance of World Ozone Day” broadcasted on 16.09.98.

### GOVERNMENT AWARD

Awarded one item monetary grant and certificate by the Ministry of Education of the Peoples Republic of Bangladesh for published articles in 1988 when the final year student of BUET.

### COUNTRIES VISITED

Austria, Belgium, France, Germany, Greece, Luxemburg, Portugal, The Netherlands and Switzerland in Europe; Hong Kong, United Arab Emirates, India and Pakistan in Asia; Canada & USA in North America and Australia.

### COMMAND OF LANGUAGE

Language	Speaking	Reading	Writing
Bangle (Mother Tongue)	Excellent	Excellent	Excellent
English (Active)	Fluent	Fluent	Excellent
Arabic (Passive)	Fair	Good	Fair

### TEACHING AND ACADEMIC EXPERIENCE

- **Teaching as Faculty Member (Currently Professor from March 25, 2009), formerly Associate Professor** (from August 05, 2005 to March 24, 2009) and Assistant Professor (from April 24, 1996 to July 2005) in Civil and Environmental Engineering (CEE) Department (formerly Environmental Engineering and Pollution Control Department) of Shah Jalal University of Science and Technology (SUST) since August 2005 to date. **Offering lectures to M.Sc. Engineering students** on Theory of Water Treatment, Theory of Wastewater Treatment, Environmental Sanitation and Health Safety, EIA for Professional Engineers, Environmental Management for Professional Engineers etc.; **Offering the lectures to undergraduate students** Engineering Economics, Environmental Microbiology, Environmental Quality and its Monitoring, Environmental Pollution Control, Environmental Sanitation, Solid Waste Management, Environmental Impact Assessment, Industrial Waste Treatment and Management, Urban Environmental Engineering and Regional Planning, Environmental Management and Auditing, Socio-economic Aspects of Environmental Engineering, Hazardous and Radioactive Waste Management, Introduction to Environmental Science and Engineering, Ecology, Water Supply Engineering: (Distribution System, & Treatment) Sewerage and Waste Water Engineering; Environmental Impact Assessment, Urban Environmental Engineering and Regional Planning, Environmental Process Technology, Natural Disaster Management, Environmental Modeling etc.;
- **Supervising the undergraduate/graduate thesis students** of CEE department;
- **Supervising the thesis of M. Sc. Engineering (by Research)** of CEE department;
- Head of the Center for Research, Testing and Consultancy (CRTC) of Civil and Environmental Engineering Department of SUST and the member of CRTC of SUST since July 2003 to date .
- Member of Academic Council of Shah Jalal University of Science and Technology (SUST) from April 1996 to November 1998 and from June 2003 to date.
- Member of Graduate Admission Committee of SUST of 1996, 1997, 2003, 2004, 2005,

- 2006 and 2007.
- Member of M. Sc Engineering Admission Committee of SUST of 2008.
  - Member of the Examination Ordinance Sub-Committee of SUST.
  - Member of the Advanced Studies Committee of SUST since June 2003.
  - Member of the Research Committee of SUST since June 2004.
  - Chairman of the Graduate Studies Committee (GSC) of Civil and Environmental Engineering Department of SUST since 2005.
  - Member of the Graduate Studies Committee (GSC) of Industrial and Production Engineering Department of SUST since 2006.
  - Preparation of curricula & Syllabi for Post graduate (M.Sc. Engineering) course of CEE Department of SUST as the Chairman of the Syllabus Committee of CEE Department;
  - Modification of curricula & Syllabi for undergraduate course of CEE Department of SUST as the Chairman of the Syllabus Committee of CEE Department;
  - **Conducting research project ‘Evaluation of the Existing Traffic Management System of Sylhet City’ as the Director** organized by SUST funded and approved by Bangladesh University Grant Commission;
  - **Conducting research projects on ‘Study on Water Quality of Surma river’** organized by SUST funded and approved by Bangladesh University Grant Commission;
  - **Conducting research projects on ‘Rainwater Harvesting for Slum Areas of Sylhet City’** organized by **International Training Network (ITN)** for Water and Waste Management wided in 18 developing countries of Asia, Africa & Latin America funded by DANIDA/UNDP/ World Bank;
  - Supervising research theses of undergraduate students of Civil and Environmental engineering department of SUST;
  - Conducting the examinations of undergraduate students and M.Sc Engineering as the Chairman of Examination Committee and Chief Invigilator of CEE Department; Active participation in conducting admission tests for undergraduate courses of SUST;
  - Planning, design, installation and renovation of Civil Engineering Testing Lab, Water Supply and Sewerage Engineering Lab, Environmental Pollution Control Lab, Environmental Modeling Lab, Environmental Fluid Mechanics Lab and Central Instrumentation Lab for Environmental Quality Testing of CEE Department of SUST; Preparation of tender specification and evaluation of tenders for different labs (above mentioned labs) of CEE Department of Shahjalal University of Science and Technology, Sylhet, Bangladesh;
  - Participation in the Environmental Committees and extensive environmental activities of Environmental Science of Ministry of Science and Information Technology, Department of Environment (DOE) of Ministry of Forest and Environment, Sylhet City Corporation, Sylhet District Administration, Community Organizations (Lions Club, Rotary Club.) and NGOs (BELA, ADAB, NGO Forum, Disaster Forum etc.) e.g. in the Healthy City Program, Water Supply Program, Sanitation Program, Disaster Management etc;

#### **ADMINISTRATIVE EXPERIENCE**

- (i) Currently the holding the position of Head of Civil and Environmental Engineering Department since June 04, 2009. Hold the position of Head of the newly established Environmental Engineering and Pollution Control Department of Shah Jalal University of Science and Technology (SUST) from April 1996 to October 1998 and lately Civil and Environmental Engineering Department since June 2003 to August 04, 2008.
- (ii) Working as the Member of the Inspection and Care-take Committee for Sylhet

- Engineering College nominated by the Syndicate of the SUST.
- (iii) Working as the member of the Organizing Committee and Reception Sub-committee of the second Convocation of SUST held in November 05, 2007 and
  - (iv) Performing the duty of the Head of the Department of Architecture of SUST as an additional duty from July 2005 to December 2006.
  - (v) Working as the member of the Library committee; Planning and Development sub-committee; Examination Execution Committee, Space Allocation Committee; Grant and Scholarship Distribution Committee to the teachers etc. of the University from April 1996 to October 1998.
  - (vi) Working as the active member and member secretary of the committees approved by the syndicate of the University for the preparation of feasibility report for opening the departments of Architecture, Urban and Regional Planning, Forestry in SUST in 1997;
  - (vii) Working as the member of the Executive Committee of Sylhet Govt. Veterinary College in the session 1996-98 nominated by the Syndicate of the SUST;
  - (viii) Working as the member of the Organizing Committee and Reception Sub-committee of the first Convocation of SUST held in April 28, 1998 and
  - (ix) Running the overall administration of Industrial and Production Engineering Department of SUST as Head of the Department from July 1997 to March 1998 as the additional duty.

#### KEY PROFESSIONAL EXPERIENCE

Six years (from January 1990 to March 1996) professional experience in Water Supply, Environmental-Sanitation, Drainage & Urban Infrastructure Projects as follows:

Organizational and Development Specialist (ODS) of AQUA Consultants & Associates Ltd/DHV Consultants (Holland) in DPHE 18 Districts Town Water Supply, Sanitation and Drainage Project **funded by the Netherlands Government** from January 1996 to March 1996. Duties included operation and maintenance of existing systems; institutional strengthening; training of the Pourashava water supply and Sanitation staffs; preparation of project reports; maintaining liaison with related agencies and organizations.

Mid-Level Engineer of AQUA Consultant & Associates Ltd in DWASA Component of Dhaka Urban Infrastructure Improvement Project **financed by ASIAN Development Bank (ADB)** from October 1995 to December 1995. Duties included supervision of laying of water lines and pressure testing of pipe lines; supervision of laying of sewer lines and construction of septic tanks, clean outs, manholes and interceptor tanks; participation in the preparation of different project reports & tender documents maintaining liaison with DWASA and all other agencies regarding project related activities etc.

On-job M. Sc. program in Water Resources Engineering (Water Quality Management) in Vrije (Free) University of Brussels and Katholic University of Leuven (KUL), Belgium as an employee of AQUA Consultants & Association Ltd from Oct. 1994 to Sept. 1995.

On-job Post Graduate Diploma Program in IHE Delft, The Netherlands as an employee of AQUA Consultants & Associates Ltd. from October 1993 to September 1994.

Local Team Leader of AQUA Consultants & Associates Ltd. in Secondary Towns Infrastructure Development Project of LGED **funded by ADB** executed by Louis Berger



International (USA) and AQUA Consultant & Associates Ltd. from November 1992 to September 1993. Duties included planning, designing & organizing field works for group of professionals as well as direct participation in field works to some extent and maintaining proper co-ordination with the group members. Field works comprised of detailed survey of service connections, pumping stations, hydrants, washouts etc.; pressure testing, flow measurement and extensive excavation works; design & preparation of base maps, service connection maps, water distribution system maps, nodal maps, leakage maps and system rehabilitation maps; detailed inventory & quality control of field works; preparation of standard drawings for various water accessories and components, survey formats for survey works related to water supply; maintaining liaison with different organizations and agencies regarding project works; data & information collection from Pourashavas (Municipalities), DPHE, District Council etc. for execution of project and maintaining liaison with them; preparation of various drafts and correspondences, monitoring reports, inventory reports, field survey reports, draft final and final reports for four district towns Sylhet, Pabna, Kushtia & Cox's Bazar in the project. etc.

Staff Engineer (Progress) of in DWASA Consumer Survey financed by World Bank and executed by AQUA consultant & Associates Ltd. from September 1992 to October 1992. Duties: Monitoring and quality control of entire project through direct co-ordination with co-coordinators of six zones within Dhaka WASA; maintaining liaison with DWASA, City Corporation, Police etc. regarding project activities; maintaining accounts regarding project execution; involvement in preparation of progress report for month ending September 1992 etc.

Water Supply and Sanitary Engineer in **ADB funded** "Dhaka Urban Infrastructure Improvement Project" executed by AQUA Consultant & Associates Ltd. from November 1991 to August 1992. Duties: Topographic survey of project area and help in translating the survey data into maps and drawings; supervision of cleaning, inspection and data collection of manholes & clogged sewer lines; laying of water supply and sewer lines and construction of tube wells, pump houses, septic tanks, clean-outs and manholes; preparation of different project reports & tender documents and design of water lines; preparation of tender evaluation reports on "Procurement of Vehicles" Well Screen and Casing Pipes" "Chlorination Equipment" and "Procurement of Pumps and Electric Appurtenances for Water Supply" etc.; involvement in different procurement works related to the project; maintaining liaison with DWASA and other agencies etc.

Water Supply Engineer of Avanti Engineers & Associated Ltd. in **World Bank financed** "Leak Detection and Waste Prevention Program" of Dhaka WASA executed by GKW Consult (Germany) in association with SEBA Mestechnik CO & KG (Austria) and Avanti Engineers & Associates Ltd. from Aug.1990 to Oct. 1991. Duties included extensive field works of detailed consumer survey, installation & replacement of valves, stopcocks, water meters, surface boxes etc., tracing & locating of valves & pipes, using sonic leak detection equipment for the selection of measurement programs in pilot areas, using ultrasonic flow meter (UFP-1000) & repair works in pilot areas, monitoring of water production & consumption and pressure variation at different points in pilot areas; completion of survey sheets, preparation of service connection layout maps, distribution system maps, leakage maps and rehabilitation maps of pilot area; maintaining liaison with DWASA, Dhaka City Corporation, Dhaka Metropolitan Police and other organizations & agencies for project

related activities and data collection from DWASA and assessment of UfW and revenue losses; preparation of special report “Surface Box Installation for Protection of Gate Valves” and providing significant input as an active team member in the preparation of “Draft Final Report” and “Final Report” of the project; participation in the preparation Technical Proposal for Chittagong WASA Unaccounted Water Management Study etc.

Junior Engineer, Bangladesh Engineering & Technological Services (BETS) Ltd. from January 1990 to July 1990. Duties included extensive field surveys for preparing base maps and land-use (topographic) maps and inserting survey data in maps for drainage system; participation in drain design and monitoring of existing flood control structures; participation in preparation of special reports on “River Training Works” and “Small Flood Control Structure”, preparation of estimate for library building of BETS, supervision of construction work and overall site management of library building of BETS etc.

## DETAILED EXPERIENCE RECORD

**From March 25, 2009 to date:**

**Employer:** Shahjalal University of Science and Technology, Sylhet, Bangladesh.

**Position:** PROFESSOR and Senior-most Faculty Member, Civil and Environmental Engineering (CEE) Department.

**Description of Duties:**

**Attending the Consultation prog**Signing the memorandum of understanding between Shahjalal University of

**Conducting Research, Testing and Consultancy services of CRTCC-CEE) at Shahjalal University of Science and technology**

**Offering lectures to the undergraduate/graduate students** on Introduction to Environmental Science and Engineering, Ecology, Water Supply Engineering, Waste Water Engineering, Environmental Microbiology, Sludge Management, Environmental Quality and its Monitoring, Environmental Pollution Control, Environmental Sanitation, Solid Waste Management, Environmental Impact Assessment, Industrial Waste and Wastewater Treatment and Management, Urban Environmental Engineering and Regional Planning, Environmental Management, Environmental Auditing, Socio-economic Aspects of Environmental Engineering, Environmental Process Technology, Hazardous and Radioactive Waste Management, Natural Disaster Management, Environmental Modeling etc.;

**Offering lectures to M.Sc. Engineering students** on Theory of Water Treatment, Theory of Wastewater Treatment, Environmental Sanitation and Health Safety, EIA for Professional Engineers, Environmental Management for Professional Engineers etc.;

**Supervising the undergraduate/M.Sc. Engineering (graduate) thesis students** of CEE department;

**Conducting research project ‘Evaluation of the Existing Traffic Management System of Sylhet City’ as the Director** organized by SUST funded and approved by Bangladesh University Grant Commission;

**Conducting research project on ‘Study on Water Quality of Surma river’** organized by SUST funded and approved by Bangladesh University Grant Commission;

**Conducting research projects on ‘Rainwater Harvesting for Slum Areas of Sylhet City’** organized by **International Training Network (ITN)** for Water and Waste Management wided in 18 developing countries of Asia, Africa & Latin America funded by DANIDA/UNDP/ World Bank;

**Member of the Research Committee** of Shah Jalal University;

**Working as the member of the Higher Studies (Graduate/Post Graduate Studies) Committee** of SUST;

**Working as the member of Academic Council** of SUST;

**Member of Peer Review Committee of Environmental Science formed by Ministry of Science and Information Technology of Peoples Republic of Bangladesh** nominated by the Vice-Chancellor of Shah Jalal University of Science and Technology, Sylhet;

**Member of the Inspection and Technical Committee** for Sylhet Engineering College formed by the Syndicate of Shah Jalal University of Science and Technology, Sylhet;

**Member of the Editorial Boards of SUST Studies, Technical and Scientific Journal** published by Shah Jalal University of Science and Technology, Sylhet;

**Modification of curricula & Syllabi for undergraduate course of CEE Department of SUST** as the member of the Syllabus Committee of CEE Department;

**Conducting the examinations of undergraduate students as the Chairman of Examination Committee, Chief Invigilator and Invigilator** of CEE Department etc. ;

**Participation in the Environmental Committees and extensive environmental activities** of Department of Environment (DOE), Sylhet City Corporation, Sylhet District Administration, Community Organizations (Lions Club, Rotary Club.) and NGOs (NBCS, ADAB, NGO Forum, Disaster Forum, Bangladesh Environmental Layers Association etc.) such as Healthy City Program, Water Supply Program, Sanitation Program, Disaster Management etc;

**Preparation of Lecture Notes on “Economics for Engineers” for undergraduate students and on “Theory of Water Treatment”, and “Theory of Waste Water Treatment” for M.Sc. Engineering students.**

**Modification of Lecture Notes** on Environmental Science and Engineering, Ecology, Water and Waste Water Engineering; Environmental Microbiology, Environmental Pollution Control, Environmental Sanitation, Solid Waste Management, Environmental Impact Assessment, Industrial Waste Treatment and Management, Urban Environmental Engineering and Regional Planning, Environmental Management and Auditing, Socio-economic Aspects of Environmental Engineering.

**Testing and Quality Monitoring** as follows:

1. Water quality testing under CRTC,
2. Sewage and waste quality testing under CRTC,
3. Industrial waste effluent and industrial water quality testing under CRTC,
4. Soil quality testing under CRTC,
5. Cement and cement quality testing under CRTC,
6. Construction material testing under CRTC,
7. Air quality testing under CRTC;

**From August 2009 to March 24, 2009:**

**Employer:** Shahjalal University of Science and Technology, Sylhet, Bangladesh.

**Position:** Associate Professor and Senioremost Faculty Member, Civil and Environmental Engineering (CEE) Department.

**Description of Duties:**

**Signing the memorandum of understanding** between Shahjalal University of Science and Technology and the Ministry of Food and Disaster Management of the People Republic of Bangladesh - Comprehensive Disaster Management Program (CDMP) for knowledge and Resource Sharing on Disaster Management Issues November and act as the Coordinator of the Linkage Program between Shahjalal University of Science and Technology and the Ministry of Food and Disaster Management of the People Republic of Bangladesh.

**Conducting Research, Testing and Consultancy services of CRTCC (CEE)** at Shahjalal University of Science and technology

**Offering lectures to the undergraduate/graduate students** on Introduction to Environmental Science and Engineering, Ecology, Water Supply Engineering, Waste Water Engineering, Environmental Microbiology, Sludge Management, Environmental Quality and its Monitoring, Environmental Pollution Control, Environmental Sanitation, Solid Waste Management, Environmental Impact Assessment, Industrial Waste and Wastewater Treatment and Management, Urban Environmental Engineering and Regional Planning, Environmental Management, Environmental Auditing, Socio-economic Aspects of Environmental Engineering, Environmental Process Technology, Hazardous and Radioactive Waste Management, Natural Disaster Management, Environmental Modeling etc.;

**Offering lectures to M.Sc. Engineering students** on Theory of Water Treatment, Theory of Wastewater Treatment, Environmental Sanitation and Health Safety, EIA for Professional Engineers, Environmental Management for Professional Engineers etc.;

**Supervising the undergraduate/graduate thesis students** of CEE department;

**Conducting research project ‘Evaluation of the Existing Traffic Management System of Sylhet City’** as the Director organized by SUST funded and approved by Bangladesh University Grant Commission;

**Conducting research project on ‘Study on Water Quality of Surma river’** organized by SUST funded and approved by Bangladesh University Grant Commission;

**Conducting research projects on ‘Rainwater Harvesting for Slum Areas of Sylhet City’** organized by **International Training Network (ITN)** for Water and Waste Management wided in 18 developing countries of Asia, Africa & Latin America funded by DANIDA/UNDP/ World Bank;

**Member of the Research Committee** of Shah Jalal University;

**Working as the member of the Higher Studies (Graduate/Post Graduate Studies) Committee** of SUST;

**Member of Peer Review Committee of Environmental Science** formed by **Ministry of Science and Information Technology of Peoples Republic of Bangladesh** nominated by the Vice-Chancellor of Shah Jalal University of Science and Technology, Sylhet;

**Member of the Inspection and Technical Committee** for Sylhet Engineering College formed by the Syndicate of Shah Jalal University of Science and Technology, Sylhet;

**Member of the Editorial Boards of SUST Studies, Technical and Scientific Journal** published by Shah Jalal University of Science and Technology, Sylhet;

**Modification of curricula & Syllabi for undergraduate course of CEE Department of SUST** as the member of the Syllabus Committee of CEE Department;

**Conducting the examinations of undergraduate students as the Chairman of Examination Committee, Chief Invigilator and Invigilator** of CEE Department etc. ;

**Participation in the Environmental Committees and extensive environmental activities** of Department of Environment (DOE), Sylhet City Corporation, Sylhet District Administration, Community Organizations (Lions Club, Rotary Club.) and NGOs (ADAB, NGO Forum, Disaster Forum, Bangladesh Environmental Layers Association etc.) such as Healthy City Program, Water Supply Program, Sanitation Program, Disaster Management etc;

**Preparation of Lecture Note on “Economics for Engineers”**

**Modification of Lecture Notes** on Environmental Science and Engineering, Ecology, Water and Waste Water Engineering; Environmental Microbiology, Environmental Pollution Control, Environmental Sanitation, Solid Waste Management, Environmental Impact Assessment, Industrial Waste Treatment and Management, Urban Environmental Engineering and Regional Planning, Environmental Management and Auditing, Socio-economic Aspects of Environmental Engineering.

**Testing and Quality Monitoring** as follows:

1. Water quality testing under CRTC,
2. Sewage and waste quality testing under CRTC,
3. Industrial waste effluent and industrial water quality testing under CRTC,
4. Soil quality testing under CRTC,
5. Cement and cement quality testing under CRTC,
6. Construction material testing under CRTC,
7. Air quality testing under CRTC;

**Consultancy services** as follows:

Team Leader of Design and Construction of Iron Removal Plant for Sylhet Womens' Medical College executed by Centre for Research, Testing and Consultancy of Civil and Environmental Engineering Department of Shah Jalal University of Science and Technology.

**From August 2005 to August 2008:**

**Employer:** Shahjalal University of Science and Technology, Sylhet, Bangladesh.

**Position:** Associate Professor and Head, Civil and Environmental Engineering (CEE) Department.

**Description of Duties:**

**Running overall administration** of CEE Department;

**Running overall administration** of Architecture Department;

**Formation of Centre for Research, Testing and Consultancy (CRTC)** at Shahjalal University of Science and technology in 2004 first at Civil and Environmental Engineering Department and then wided to other departments of School of Applied Sciences and Technology, School of Physical Sciences, Life Sciences etc.;

**Member of the Executive Committee of CRTC-SUST and Head of the CRTC-CEE at SUST.;**

**Offering lectures to the undergraduate/graduate students** on Introduction to Environmental Science and Engineering, Ecology, Water Supply Engineering, Waste Water Engineering, Environmental Microbiology, Sludge Management, Environmental Quality and its Monitoring, Environmental Pollution Control, Environmental Sanitation, Solid Waste Management, Environmental Impact Assessment, Industrial Waste and Wastewater Treatment and Management, Urban Environmental Engineering and Regional Planning, Environmental Management, Environmental Auditing, Socio-economic Aspects of Environmental Engineering, Environmental Process Technology, Hazardous and Radioactive Waste Management, Natural Disaster Management, Environmental Modeling etc.;

**Offering lectures to M.Sc. Engineering students** on Theory of Water Treatment, Theory of Wastewater Treatment, Environmental Sanitation and Health Safety, EIA for Professional Engineers, Environmental Management for Professional Engineers etc.;

**Supervising the undergraduate/graduate thesis students** of CEE department;

**Supervising the thesis of M. Sc. Engineering (by Research)** of CEE department;

**Working as Deputy Task Leader and Key Expert** in ‘Asia-Pro-Eco Program on Technology Partnership for Innovative Treatment of Drinking and Industrial Waste Water’ funded by European Union jointly carried out by SUST of Bangladesh, University of Applied Sciences, Karlsruhe of Germany, University of Calabria of Italy and Jiangsu Polytechnic University of Peoples Republic of China;

**Conducting research project ‘Evaluation of the Existing Traffic Management System of Sylhet City’ as the Director** organized by SUST funded and approved by Bangladesh University Grant Commission;

**Conducting research project on ‘Study on Water Quality of Surma river’** organized by SUST funded and approved by Bangladesh University Grant Commission;

**Conducting research projects on ‘Rainwater Harvesting for Slum Areas of Sylhet City’** organized by **International Training Network (ITN)** for Water and Waste Management wided in 18 developing countries of Asia, Africa & Latin America funded by DANIDA/UNDP/ World Bank;

**Member of the Research Committee** of Shah Jalal University;

**Working as the member of the Higher Studies (Graduate/Post Graduate Studies) Committee of SUST;**

**Working as the member of Academic Council of SUST;**

**Chairman of the Graduate Studies Committee (GSC) of CEE department of SUST;**

**Member of the GSC of Industrial and Production Engineering (IPE) Deptment of SUST;**

**Member of Peer Review Committee of Environmental Science formed by Ministry of Science and Information Technology of Peoples Republic of Bangladesh nominated by the Vice-Chancellor of Shah Jalal University of Science and Technology, Sylhet;**

**Member of the Inspection and Technical Committee for Sylhet Engineering College formed by the Syndicate of Shah Jalal University of Science and Technology, Sylhet;**

**Member of the Editorial Boards of SUST Studies, Technical and Scientific Journal published by Shah Jalal University of Science and Technology, Sylhet;**

**Head of the Shahjalal University Sub-centre of International Training Network (ITN) for Water and Waste Management wided in 18 developing countries of Asia, Africa & Latin America funded by DANIDA/UNDP/ World Bank since June 2003 to date; Active participation in modification of course curricula of environmental engineering (water supply and sanitation) in diploma and undergraduate level in the Poly-Techniques, BITs and universities of Bangladesh as the member of the Core-committee of ITN for Updating course and Curricula; Attending the meetings including Annual Meeting held in the ITN centre at BUET for decision making of ITN; Attending Board Meeting of ITN as the ITN Board Member of ITN Bangladesh;**

**Modification of curricula & Syllabi for undergraduate course of CEE Department of SUST as the Chairman of the Syllabus Committee of CEE Department;**

**Submitted PhD thesis on 'Identification of Causes of Arsenic Contamination in groundwater of Bangladesh' in September 2006 and subsequently approved it for awarding PhD degree.**

**Chairman of the Steering Committee of Surma River Area Water Partnership (SRAWP) under the auspices of Global Water Partnership from August 2003, to date.**

**Conducting the examinations of undergraduate students as the Chairman of Examination Committee, Chief Invigilator and Invigilator of CEE Department etc. ;**

**Active participation in conducting admission tests for undergraduate courses of SUST as the Member of the Admission Committee and Coordinator of Examination Hall;**

**Renovation of different laboratories of CEE department such as Strength of Material Lab, Engineering Material Lab, Geo-technical Engineering Lab, Transportation Engineering Lab, Water Supply and Sewerage Engineering Lab, Environmental Pollution Control Lab, Environmental**



Modeling Lab, Environmental Fluid Mechanics Lab and Central Instrumentation Lab for Environmental Quality Testing of CEE Department of SUST;

**Preparation of tender specification and evaluation of tenders for different labs** (above mentioned labs) of CEE Department of Shahjalal University of Science and Technology, Sylhet, Bangladesh;

**Participation in the Environmental Committees and extensive environmental activities** of Department of Environment (DOE), Sylhet City Corporation, Sylhet District Administration, Community Organizations (Lions Club, Rotary Club.) and NGOs (ADAB, NGO Forum, Disaster Forum, Bangladesh Environmental Layers Association etc.) such as Healthy City Program, Water Supply Program, Sanitation Program, Disaster Management etc;

**Modification of Lecture Notes** on Environmental Science and Engineering, Ecology, Water and Waste Water Engineering; Environmental Microbiology, Environmental Pollution Control, Environmental Sanitation, Solid Waste Management, Environmental Impact Assessment, Industrial Waste Treatment and Management, Urban Environmental Engineering and Regional Planning, Environmental Management and Auditing, Socio-economic Aspects of Environmental Engineering.

**Testing and Quality Monitoring** as follows:

1. Water quality testing under CRTC,
2. Sewage and waste quality testing under CRTC,
3. Industrial waste effluent and industrial water quality testing under CRTC,
4. Soil quality testing under CRTC,
5. Cement and cement quality testing under CRTC,
6. Construction material testing under CRTC,
7. Air quality testing under CRTC;

**Consultancy services** as follows:

- (1) Project Head and EIA Expert of Environmental Impact Assessment of Madina Garden City executed by Centre for Research, Testing and Consultancy of Civil and Environmental Engineering Department of Shah Jalal University of Science and Technology in 2007-2008.
- (2) Project Head and Team Leader of Gazi Burhanuddin City, a model urban planning and housing project of a worth of 2.5 million taka (50 thousand US \$) executed by Centre for Research, Testing and Consultancy of Civil and Environmental Engineering Department of Shah Jalal University of Science and Technology since 2006 to date.
- (3) Project Head of Madina Garden City, a model urban planning and housing project located in Sylhet city of a worth of 1.5 million taka (30 thousand US \$) executed by Centre for Research, Testing and Consultancy of Civil and Environmental Engineering Department of Shah Jalal University of Science and Technology in 2006-2008.
- (4) Project Head and Team Leader of Design and Construction of Iron Removal Plant by Roughing Filtration for removing iron of concentration in excess of 11 mg/l in Hotel Asma International Hotel Compound located in Sylhet City of a worth of 0.1 million taka (2 thousand US \$) executed by Centre for Research, Testing and Consultancy of Civil and Environmental Engineering Department of Shah Jalal University of Science and Technology in 2005.

**From June 2003 to July 2005:**

**Employer:** Shahjalal University of Science and Technology, Sylhet, Bangladesh.

**Position:** Head and Senior-most Faculty Member in the rank of Professor and Head, Civil and Environmental Engineering (CEE) Department.

**Description of Duties:**

**Running overall administration** of CEE Department;

**Running overall administration** of Architecture Department;

**Offering lectures to the undergraduate students** on Introduction to Environmental Science and Engineering, Ecology, Water Supply Engineering, Waste Water Engineering, Environmental Microbiology, Sludge Management, Environmental Quality and its Monitoring, Environmental Pollution Control, Environmental Sanitation, Solid Waste Management, Environmental Impact Assessment, Industrial Waste Treatment and Management, Urban Environmental Engineering and Regional Planning, Environmental Management, Environmental Auditing, Socio-economic Aspects of Environmental Engineering, Environmental Process Technology, Hazardous and Radioactive Waste Management, Natural Disaster Management, Environmental Modeling etc.

**Supervising the undergraduate thesis students** of CEE department;

**Working as Deputy Task Leader and Key Expert** in 'Asia-Pro-Eco Program on Technology Partnership for Innovative Treatment of Drinking and Industrial Waste Water' funded by European Union jointly carried out by SUST of Bangladesh, University of Applied Sciences, Karlsruhe of Germany, University of Calabria of Italy and Jiangsu Polytechnic University of Peoples Republic of China;

**Working as the Member in the Steering Committee of International Joint Research Project** 'Asia-Pro-Eco Program on Technology Partnership for Innovative Treatment of Drinking and Industrial Waste Water' nominated by Vice-Chancellor of SUST and approved by the Syndicate of SUST;

**Conducting research projects** on 'Study of Arsenic removal using Sylhet Sand', 'Study on Water Quality of Surma river' and 'Traffic management study in Sylhet City' organized by SUST funded and approved by Bangladesh University Grant Commission;

**Working as the member of the Research Committee** of ShahJalal University;

**Working as the member of the Higher Studies (Graduate/Post Graduate Studies) Committee** of SUST;

**Working as the member of Academic Council** of SUST;

**Member of Peer Review Committee of Environmental Science** formed by Ministry of Science and Information Technology of Peoples Republic of Bangladesh nominated by the Vice-Chancellor of Shah Jalal University of Science and Technology, Sylhet;

**Member of the Editorial Boards of SUST Studies, Technical and Scientific Journal** published by Shah Jalal University of Science and Technology, Sylhet;

**Working as the Head of the Shahjalal University Sub-centre of International Training Network (ITN)** for Water and Waste Management wided in 18 developing countries of Asia, Africa & Latin America funded by DANIDA/UNDP/ World Bank; Organizing 4 (four) Days Training Course on “Gender Issues in Water Supply sanitation Sector” for professionals in the field of water and waste management in October 2004 under ITN;

Active participation in modification of course curricula of environmental engineering (water supply and sanitation) in diploma and undergraduate level in the Poly-Techniques, BITs and universities of Bangladesh as the member of the Core-committee of ITN for Updating course and Curricula; Attending the meetings including Annual Meeting held in the ITN centre at BUET for decision making of ITN; Attending Board Meeting of ITN as the ITN Board Member of ITN Bangladesh;

**Modification of curricula & Syllabi for undergraduate course of CEE Department of SUST** as the Chairman of the Syllabus Committee of CEE Department;

**Chairman of the Steering Committee of Surma River Area Water Partnership (SRAWP)** under the auspices of Global Water Partnership from August 2003, to date.

**Conducting the examinations of undergraduate students as the Chairman of Examination Committee, Chief Invigilator and Invigilator** of CEE Department etc. ;

**Active participation in conducting admission tests for undergraduate courses of SUST as the Member of the Admission Committee and Coordinator** of Examination Hall;

**Renovation of different laboratories of CEE department** such as Strength of Material Lab, Engineering Material Lab, Geo-technical Engineering Lab, Transportation Engineering Lab, Water Supply and Sewerage Engineering Lab, Environmental Pollution Control Lab, Environmental Modeling Lab, Environmental Fluid Mechanics Lab and Central Instrumentation Lab for Environmental Quality Testing of CEE Department of SUST;

**Preparation of tender specification and evaluation of tenders for different labs** (above mentioned labs) of CEE Department of Shahjalal University of Science and Technology, Sylhet, Bangladesh;

**Participation in the Environmental Committees and extensive environmental activities** of Department of Environment (DOE), Sylhet City Corporation, Sylhet District Administration, Community Organizations (Lions Club, Rotary Club.) and NGOs (ADAB, NGO Forum, Disaster Forum, Bangladesh Environmental Layers Association etc.) such as Healthy City Program, Water Supply Program, Sanitation Program, Disaster Management etc;

**Preparing Lecture Notes** on Environmental Science and Engineering, Ecology, Water and Waste Water Engineering; Environmental Microbiology, Environmental Pollution Control, Environmental Sanitation, Solid Waste Management, Environmental Impact Assessment, Industrial Waste Treatment and Management, Urban Environmental Engineering and Regional Planning, Environmental Management and Auditing, Socio-economic Aspects of Environmental Engineering.

**Form December 27, 2002 to May 31, 2003:**

**Employer:** Shah Jalal University of Science and Technology Sylhet Bangladesh. (EEPC) Department.

**Position:** Senior-most Faculty Member in the rank of Assistant Professor, Civil and Environmental Engineering Department

**Description of Duties:**

Offering the lectures to the undergraduate students on the courses of Introduction to Environmental Sciences & Engineering, Ecology, Water Supply Engineering: (Distribution System, & Treatment) Sewerage and Waste Water Engineering; Urban Drainage, Environmental Microbiology, Environmental Pollution Control, Environmental Sanitation, Solid Waste Management, Environmental Impact Assessment, Industrial Waste Treatment and Management, Urban Environmental Engineering and Regional Planning, Environmental Management, Environmental Auditing, Socio-economic Aspects of Environmental Engineering etc.

**From December 27, 1998 to December 26, 2002:** On-job PhD. program in Environmental Engineering under Civil Engineering Department of Bangladesh University of Engineering and Technology (BUET) on topic “Sources and Causes of Arsenic Contamination in Groundwater of Bangladesh.

**Related Research Activities:**

**Completed 12 credit hour theoretical courses successfully** with the CGPA 3.125 in the scale of 4.

**Submitted 50-page preparatory research report on ‘Pre-treatment and Secondary Treatment’** for PhD program in Environmental Engineering Division under Civil Engineering Department of BUET in February 1999;

**Submitted 45-page preparatory research report on ‘Arsenic, Iron and Manganese in Water’** for PhD program in Environmental Engineering Division under Civil Engineering Department of BUET in April 1999.

**Submitted 70-page preparatory research report on ‘Solid Waste Management in Bangladesh’** for PhD program in Environmental Engineering Division under Civil Engineering Department of BUET in September 1999.

**Completed extensive fieldwork and continuous laboratory tests for PhD Program** on “Identification of Causes of Arsenic Contamination in Groundwater of Bangladesh”

**Active Participation in MIT (USA) - BUET Link research project on ‘Modeling Mobilization and Transport of Arsenic in the Subsurface’** as a field researcher from 1999 to 2000.

**Active Participation in United Nations University, Tokyo, Japan - BUET Research Collaboration Project on ‘Development of Low Cost Technologies for Removal of Arsenic from Groundwater’** as a Field Researcher from 2000 to 2001.

**Peer reviewed technical papers for Water Research Journal ‘Water Science and Technology (ISSN:0273-1223)’** of IWA published by Elsevier Publication Ltd.

Peer reviewed technical papers for Research Journal 'Water Supply (ISSN: 1606 – 9749)' of IWA published by Blackwell Science Ltd., London UK.

'Influence of Upstream Sediment on Arsenic Contamination of Groundwater in Bangladesh' based on PhD research has been presented in International Symposium 'Fate of Arsenic in the Environment' organized by United Nations University, Japan and BUET held on February 05, 2003 and subsequently published in the proceeding of the Symposium.

**Form November 05, 1998 to December 26, 1998:**

**Employer:** Shah Jalal University of Science and Technology Sylhet Bangladesh.

**Position:** Assistant Professor, Environmental Engineering and Pollution Control (EEPC) Department

**Description of Duties:**

**Offering the lectures to the undergraduate students** on the courses of Introduction to Environmental Sciences & Engineering: Ecology, Engineering Mechanics; Water Supply Engineering: (Distribution System, & Treatment) Sewerage and Waste Water Engineering; Urban Drainage, Environmental Microbiology, Sludge Management, Water Quality Analysis, Environmental Quality and its Monitoring Environmental Pollution Control, Environmental Sanitation, Solid Waste Management, Environmental Impact Assessment, Industrial Waste Treatment and Management etc..

**From April 24, 1996 to November 04, 1998:**

**Employer:** Shahjalal University of Science and Technology, Sylhet, Bangladesh.

**Position:** Senior-most Faculty Member in the rank of Assistant Professor and Head (FOUNDING HEAD OF THE NEWLY ESTABLISHED EEPC DEPARTMENT), Environmental Engineering and Pollution control (EEPC) Department.

**Description of Duties:**

**Running overall administration** of EEPC Department;

**Offering lectures to the undergraduate/graduate students** on Introduction to Environmental Science and Engineering, Ecology, Water Supply Engineering, Waste Water Engineering; Environmental Microbiology, Environmental Quality and its Monitoring, Environmental Pollution Control, Environmental Sanitation, Solid Waste Management;

**Working as Deputy Link Coordinator/Aacting Link Coordinator and Waste Water Treatment Specialist in "Appropriate Technology for Waste Water Treatment"** first Research Linkage Project of SUST with Staffordshire University of UK financed by ODA (UK) from November 1996 to December 1997;

**Working as the Co-ordinate of Shahjalal University Sub-centre of International Training Network (ITN) for Water and Waste Management** wided in 18 developing countries of Asia, Africa & Latin America funded DANIDA/UNDP/ World Bank from December 1996 to November 1998. Organizing 4 (four) Days Orientation Workshops for professionals in the field of water and waste management in December 1997 under ITN; Active participation in modification of course curricula of environmental engineering (water supply and sanitation) in diploma and undergraduate level in the Poly-Techniques, BITs and universities of Bangladesh as the member of the Core-committee of ITN for Updating course and Curricula; Attending the meetings including Annual Meeting held in the ITN centre at BUET for decision making of ITN.

**Board Member, Bangladesh Centre of International Training Network (ITN) for Water & Waste Management** widied in 18 developing countries of Asia, Africa and Latin America in the session 1997-1998 and 2002-2003; Attending Board Meeting of ITN as the ITN Board Member of ITN Bangladesh.

**Member, Distribution Division (Operation and Maintenance Committee) of International Water Supply Association (IWSA)** since September 1995. Attended Division Meetings (in Madrid 1995 & in Hong Kong in November 1996) and took active participation in the activities of division;

**Member of the Task Force for Unaccounted for Water of International Water Supply Association (IWSA)** for the session 1996-1997;

**Participation in Joint Research Project entitled “Arsenic Contamination of Groundwater in Bangladesh Case Study of Samta Village” funded by Toyota Foundation** and conducted by by Asia Arsenic Network AAN, Research Group of Applied Geology of Miazaki University of Japan, AAN, with the assistance of National Institute of Preventive and Social Medicine NIPSOM of Bangladesh, Rajshahi University, Bangladesh University of Engineering and Technology and Shahjalal University of Science and Technology.

**Chairperson, Technical Session, Water Hong Kong 96, 10<sup>th</sup> ASPAC-IWSA Regional Conference organized by IWSA** held in Hong Kong from November 11-15, 1996;

**Expert member of National Committee for investigating the post effects of exploration in Magurcharra Gas Field** formed by the Department of Forest under the Ministry of Forest;

**Working as the member of Academic Council** of SUST;

**Preparation and Modification of curricula & Syllabi for undergraduate course of EEPC Department** of SUST as the Chairman of the Syllabus Committee of EEPC Department;

**Planning, design, installation and renovation of different laboratories of CEE departments** such as Strength of Material Lab, Engineering material Lab, Geo-technical engineering Lab, Transportation Engineering Lab, Water Supply and Sewerage Engineering Lab, Environmental Pollution Control Lab, Environmental Modeling Lab, Environmental Fluid Mechanics Lab & Environmental Quality Lab of EEPC Department;

**Preparation of tender specification and evaluation of tenders for different labs** (above mentioned labs) of Environmental Engineering and Pollution Control Department of Shahjalal University of Science and Technology, Sylhet, Bangladesh;

**Conducting the examinations of undergraduate students** as the Chairman of Examination Committee and Chief Invigilator of EEPC Department; Active participation in conducting admission tests for undergraduate courses of SUST;

**Preparation of feasibility report for opening the departments of Architecture Urban and Regional Planning, Forestry in SUST** as the Active member and member secretary of the committee approved by the Syndicate of the University;

**Participation in the Environmental Committees and extensive environmental activities** of Sylhet Municipality & Sylhet District Administration, Community Organizations (Lions Club, Rotary Club.) and NGOs (ADAB, NGO Forum, Disaster Forum etc.) e.g. in the Healthy City Program, Water Supply Program, Sanitation Program, Disaster Management etc;

**Running the overall administration of Industrial and Production Engineering Department of SUST** from July 1997 to March 1998 as the additional duty.

**From January 1996 to March 1996:**

**Position:** Organizational and Development Specialist (ODS), AQUA Consultants & Associates Ltd/DHV Consultants (Holland).

**Project:** DPHE 18 Districts Town Water Supply, Sanitation and Drainage Project funded by the Netherlands Government.

**Description of Duties:** Operation and maintenance of existing systems; institutional strengthening; training of the Pourashava water supply and Sanitation staffs; *preparation of project reports*; maintaining liaison with related agencies and organizations.

**From October 1995 to December 1995:**

**Position:** Mid-Level Engineer, AQUA Consultant & Associates Ltd.

**Project:** Dhaka Urban Infrastructure Improvement Project (DWASA) Component financed by ADB.

**Description of Duties:** Supervision of laying of water lines and pressure testing of pipe lines; supervision of laying of sewer lines and construction of septic tanks, clean outs, manholes and interceptor tanks; participation in the preparation of different project reports & tender documents maintaining liaison with DWASA and all other agencies regarding project related activities etc.

**Project:** Industrial Pollution Control and Management (Phase-II) of Ministry of Industry of Bangladesh Government funded by ADB executed by BKH Consultant (Netherlands) and AQUA Consultant & Associates (Bangladesh) Ltd.

**Description of Duties:** Supervision of field survey in different industries (Textile, Tannery, Cement, Fertilizer, Paper & Pulp etc.); supervision of socio-economic survey; active participation in process quality of industries; active participation in design of treatment units; *preparation of different project reports* etc.

**From October 1994 to September 1995:**

On-job M. Sc. program in Water Resources Engineering (Water Quality Management) in Vrije (Free) University of Brussels and Katholic University of Leuven (KUL), Belgium as an employee of AQUA Consultants & Association Ltd.

**Related Professional Training:** Sewer system design using simulation program RIO, Integration project design; one week field work on bio-monitoring of water quality etc.

**From October 1993 to September 1994:**

On-job Post Graduate Diploma Program in IHE Delft, The Netherlands as an employee of AQUA Consultants & Associates Ltd.

**Related Professional Training:** Storm sewer design by conventional method, water transport distribution system design using computer package “ALEID”, design of water & waste water treatment plant; case studies on water supply system, water treatment, waste water treatment sludge treatment, water quality monitoring and water quality analysis; one week field-work on water quality monitoring and water analysis; one and half month field rip in water supply companies; water, waste water & sludge treatment plants; manufacturing companies of water & sewer system accessories and equipment in the Netherlands, Switzerland, Germany, Belgium & Luxembourg etc.

**From November 1992 to September 1993:**

**Position:** Local Team Leader, AQUA Consultants & Associates Ltd.

**Project:** Secondary Towns Infrastructure Development Project of LGED funded ADB executed by Louis Berger International (USA) and AQUA Consultant & Associates Ltd.

**Description of Duties:**

(a) Water System Leak Detection Component: Planning, designing & organizing field works for group of Assistant Engineers, Sub-assistant Engineers & Surveyors as well as direct participation in field works to some extent and maintaining proper co-ordination with the group members. Field works comprised of service connections survey, pumping stations survey, hydrants survey, washouts survey, pressure testing, flow measurement and extensive excavation works; Design & preparation of base maps, service connection maps, water distribution system maps, nodal maps, leakage maps and system rehabilitation maps; Detailed inventory & quality control of field works; preparation of standard drawings for various water accessories and components, survey formats for survey works related to water supply; maintaining liaison with different organizations and agencies regarding project works; data & information collection from Pourashavas (Municipalities). DPHE, District Council etc. for execution of project and maintaining liaison with them, *preparation of various drafts and correspondences, monitoring reports, inventory reports, field survey reports, draft final and final reports for four district towns Sylhet, Pabna, Kushtia & Cox’s Bazar in the project. etc.*

(b) Traffic Management Component: Planning, designing & organizing field works for group of Assistant Engineers, Sub-assistant Engineers & Surveyors as well as direct participation in field works to some extent and maintaining proper co-ordination with the group members, Field works comprised of traffic survey and road survey consisting of intersection volume count, 12 hourly total volume count, terminal survey, road sight interview (freight survey), home interview, design of culverts, drains etc., preparation of survey formats, maps and standard drawings related to traffic management; detailed inventory of existing roads, footpath, detailed inventory, monitoring & quality control of field works, data & information collection from different sources like Pourashavas, Police LGED, Roads and Highway Department (RHD), District Administration, District Council, Bangladesh Road Transport Authority; *preparation of various drafts and correspondences, monitoring reports, inventory reports & field survey reports, draft final & final reports for three district towns Sylhet Maymensingh & Bogra in the project etc.*

**Form September 1992 to October 1992:**

**Position:** Staff Engineer (Progress), AQUA Consultants & Associates Ltd.



**Project:** DWASA Consumer Survey financed by World Bank and executed AWQUA consultant & Associates Ltd.

**Description of Duties:** Monitoring and quality control of entire project through direct co-ordination with co-coordinators of six zones within Dhaka WASA; maintaining liaison with DWASA, City Corporation, Police etc. regarding project activities; maintaining accounts regarding project execution; involvement in preparation of progress report for month ending September 1992 etc.

**From November 1991 to August 1992:**

**Position:** Water Supply and Sanitary Engineer

**Project:** "Dhaka Urban Infrastructure Improvement Project" executed by AQUA Consultant & Associates Ltd. funded by ADB.

**Description of Duties:** Topographic survey of project area and help in translating the survey data into maps and drawings; supervision of cleaning, inspection and data collection of manholes & clogged sewer lines; laying of water supply and sewer lines and construction of tube wells, pump houses, septic tanks, clean-outs and manholes; & tender and design of water lines; *Preparation of different tender documents and tender evaluation reports on "Procurement of Vehicles" Well Screen and Casing Pipes" "Chlorination Equipment" and "Procurement of Pumps and Electric Appurtenances for Water Supply" etc.;* *Testing and monitoring of quality of water and sewage in the project areas, Preparation of different project reports;* involvement in different procurement works related to the project; maintaining liaison with DWASA and other agencies etc.

**Form August 1990 to October 1991:**

**Position:** Water Supply Engineer, Avanti Engineers & Associated Ltd.

**Project:** World Bank financed "Leak Detection and Waste Prevention Program" of Dhaka WASA executed by GKW Consult (Germany) in association with SEBA Mestechnik CO & KG (Austria) and Avanti Engineers & Associates Ltd.

**Description of Duties:** Engaged in Extensive field works of detailed consumer survey, installation & replacement of valves, stopcocks, water meters, surface boxes etc., tracing & locating of valves & pipes, using sonic leak detection equipment for the selection of measurement programmes in pilot areas, using ultrasonic flow meter (UFP-1000) & repair works in pilot areas, monitoring of water production & consumption and pressure variation at different points in pilot areas; completion of survey sheets, preparation of service connection layout maps, distribution system maps, leakage maps and rehabilitation maps of pilot area; maintaining liaison with DWASA, Dhaka City Corporation, Dhaka Metropolitan Police and other organizations & agencies for project related activities and data collection from DWASA and assessment of UfW and revenue losses; *Testing and monitoring of water quality of in the DWASA jurisdiction, preparation of special reports on "Surface Box Installation for Protection of Gate Valves" and "Groundwater quality of Tubewells of Dhaka WASA" , and providing significant input as an active team member in the preparation of "Draft Final Report" and "Final Report" of the project; participation in the preparation Technical Proposal for Chittagong WASA Unaccounted Water Management Study etc.*

**From January 1990 To July 1990:**

**Position:** Junior Engineer, Bangladesh Engineering & Technological Services (BETS) Ltd.

**Description of Duties:** Extensive field survey for preparing base maps and land-use (topographic) maps and inserting survey data in maps for drainage system; participation in design of drains and embankments and monitoring of existing flood control structures; participation in

preparation of special reports on “River Training Works” and “Small Flood Control Structure”, preparation of estimate for library building of BETS, supervision of construction work and overall site management of library building of BETS etc.

## REFERENCES

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