

---

## CV of MD. ABU SYED

---

### Objective

To develop progressive professional career in ecosystem assessment, management and monitoring, environmental health, management and policy, RS & GIS for environment, explore new technologies in these areas.

### Interests

Ecosystem modeling, Management Guideline for protected area, Environmental Management Guideline, EIA, Environmental Assessment, Monitoring, Planning, Remote Sensing and GIS projects, Spatial database management, RS & GIS data quality assurance, RS & GIS for HSE, oil & gas industry.

### Education

**M.Sc. in Geo-information Science and Earth Observation (Remote Sensing & GIS);** Specialization: Natural resources Management, International Institute for Geo-information Science and Earth Observation (ITC-[www.itc.nl](http://www.itc.nl)), The Netherlands, **August 1999 – February 2001**

**Thesis title:** "An Evaluation of Remote Sensing Data for Detecting Edges of Fragmented Mangroves in The Sundarbans, Bangladesh". The research synthesized environmental factors (natural and human interference) affecting mangrove ecosystem and optical & microwave sensor capability in detecting stand parameters as well as spatial analysis of different parameters.

➤ **B.Sc. (Honours) in Forestry and Environmental Sciences;** Institute of Forestry and Environmental Sciences, Chittagong University, Bangladesh, **July 1987-December 1992**

**Management Plan:** Prepared a 20 years Working Plan (Management Plan) for Cox's Bazaar Forest Division. It includes 10 years, 5 years and Annual Operational Plans.

**Review Paper:** Title "Land Accretion and soil Stabilization Due to Coastal Afforestation in Bangladesh". The review paper was based on RS and GIS data analysis.

### Scholarships / fellowships

- PhD-Research Scholarship School Computing Science, University of Middlesex, UK (declined) March 2002
- Netherlands Fellowship Program (NFP) for M.Sc. Degree International Institute for Geo-information Science and Earth Observation (ITC), The Netherlands, August 1999-April 2001
- FAO-UNDP Fellowship (Project BGD 85/011) for B.Sc. Degree IFESCU, Chittagong University, Chittagong, Bangladesh, July 1987-December 1992

### Profile

- Excellent proficiency in English (TOEFL iBT Score 96)
- Professional skill in environmental modeling e.g., T21, Aim and APM models.
- Innovative and dedicated professional in EIA, Environmental Assessment, Monitoring, Planning, Ecosystem modeling, Environmental Management Guideline development.
- Over 15 years' of professional experience in environment, Remote Sensing and GIS works.
- Proven record of developing excellent working relationship with fellow professionals, researcher and other stakeholders, fostering diversity in multicultural environments.
- Proven skill in scientific writing with publications in international scientific journals.
- Extensive professional experience in Erdas Imagine, Arc GIS, ENVI, IDL, MatLab, eCognition, Surfer 8, WinRose, ILWIS, Minitab, SPSS, Statistica, Programming in VB, C++.
- Ability to sell concepts and successfully negotiate terms. Excellent training and presentation skill using audio visual aids.

## Key skills

- Teaching experience in undergraduate & graduate level
- Research supervision PhD & M.Sc. (research) and B.Sc. (hons) projects.
- Environmental Impact Assessment, Certification, Environmental Index Mapping, Managements,
- Environmental policy and management guideline development
- Environmental Standards
  - Spatial Modeling for ecological and environmental issues from Aerial photographs/satellite images;
  - Professional GIS and digital image processing, photogrammetric processing and analyses using Erdas Imagine, Envi, eCognition, ArcGIS, Surfer, MapInfo;
- Digital Image Processing and mapping activities and that include:
  - Both optical and RADAR ground receiving station (GRS) operations
  - Real time ground truth using portable GRS of ERS II. Radiometric corrections
  - Rectification of raster images and all other geometric corrections
  - Ortho rectification of images
  - Mosaicking raster images
  - Unsupervised and supervised digital image classification
  - Image fusion
  - Many other related analyses of remote sensing by digital image processing, Digital photogrammetric processing and analyses in Matlab, Erdas Imagine, ENVI, IDL, IDRISI, Data conversion
  - Import/Export of Raster images and Different filtering on Raster Images
  - Different image processing techniques for microwave imagery
  - Automatic feature extraction, 3D visualization and feature extraction
  - DTM/DEM generation from satellite imagery by ERDAS imagine
  - Aerial Triangulation with different orientation corrections of Aerial photographs
  - DTM/DEM generation from Aerial photographs/satellite images
  - 3D feature extraction from Aerial photographs/satellite images
  - Familiar and extensive work experience in ARC INFO workstation, ArcView, ArcGIS (Generation, visualization and dissemination of geospatial data, design and operation of geospatial information production and dissemination systems, topographic and thematic information extraction and integration and all GIS related analytical works.)

## Professional development

- Regional Training Workshop on Scenario and Modeling for Integrated Environmental Assessment in Asia and the Pacific Hua Hin, Thailand, 25-28 May 2009
- "Morphological analysis and predictions of the Jamuna river based on Remote Sensing and GIS techniques" EGIS and Bangladesh Water Development Board, Dhaka, Bangladesh
- Professional training on Introduction to Project Management and Proposal Writing by Project Manager, MDA Geospatial, Canada at CEGIS Training Center.
  - "Microwave Data Processing and Object Based Classification" EGIS, Dhaka, Bangladesh
  - "Codes of Environmental Standards" Bangladesh Forest Department Head Office
  - "Trainers Training for participatory forest management and environmental conservation" from FAO and WFP.
  - "Conduct and Disciplinary Rules for Public Servants" Regional Public Administration Training Centre, Rajshahi, Bangladesh
  - "Elementary Certificate on French Language" Alliance Francaise, Chittagong, Bangladesh
  - **1992** "Water man ship training-for Speed boats & other light marine vessels" Engineers Centre and School of Military Engineering, Quadirabad, Bangladesh
  - "Senior Forest Service Course on Field Engineering" Engineers Centre and School of Military Engineering, Quadirabad, Bangladesh

## Professional trainer

- **2002-to date** Supervise and train under graduate and graduate students in Remote

Sensing GIS applications, image processing

- **2001-2002** CEGIS authorized professional trainer for; Introduction to Remote Sensing and Image Processing, Advanced Image Processing Techniques, Introduction to ArcGIS
- **1993-1999** Local Government Engineering Dept, Bangladesh authorized trainer for Engineers in environmental aspects in infrastructure (rural roads, growth centers)
- **1993-1999** World Food Program and Asian Development Bank authorized trainer's trainer on Participatory Forestry, Environmental Management for Bangladesh Forest Dept and NGOs officials.

## Professional experiences

*May 2008 - Till date*

*Research Fellow*

*Bangladesh Centre For Advanced Studies (BCAS), Dhaka.*

### Recent projects

- **Country Coordinator**-CDMP 5b-1-Support for a Disaster Management Information Network (DMIN), Design, Test and Demonstrate a DMIN down to household level.
  - **Case Study**-Environmental Flow of Bakkhali River Cox's Bazar-IKONOS & QuickBird temporal images being analysed along with secondary data to calculate environmental flow for Bakkhali River which was dammed by putting a Rubber Dam for agricultural irrigation. From this M.Sc. Course material is being (final draft submitted) developed for Tribhuvan University, Kathnadu, Nepal.
  - **Natural Resources and Environment Specialist**-Demonstration Project on Water Quality Management in Upper Catchment of Turag River. Worked as Trainer for Deputy Directors of DOE on EIA, GIS, and Environmental Cartography.
  - **Project Leader**: Development of Environmental Management Guideline (EMG) for 5 industrial sectors:
    - ❖ Iron and Steel Re-rolling mills
    - ❖ Rice Mills
    - ❖ Welding workshops
    - ❖ Hospital, Heath Clinics and Diagnostic Centres- external consultant employed for this.
- Development of guideline and interactive GIS database for Department Of Environment (DOE), GOB.
- Major Contribution to the concept, execution and report writing of the project titled "The Probable Impacts of Climate Change on Poverty and Options of Coping with Adverse Effects of Climate Change in Bangladesh." Planning Commission and UNDP funded project.
  - Community risk vulnerability mapping-thematic maps are being produced from social and secondary data (BBS) based on maps from IKONOS and QuickBird images.

*April 2004 – July 2007*

*Research Associate (Remote Sensing), Environmental Studies Centre (ESC) Qatar University, Doha, Qatar*

### Recent projects

- Guide M.Sc. research of exchange students in RS and GIS. Recently two M.Sc. students from Arabian Gulf University, Bahrain completed their M.Sc. research in:
  - ◆ Sand dune movement and its impact on Mesaieed Industrial City environment;
  - ◆ Environmental hazards from quarry sites in the State of Qatar.
  - ◆ Mr. Fakhr El Deen, PhD student of Khartoum University did his all RS and GIS work on optimum National Highway alignment (September 2004).
  - ◆ Mr. Abdul Aziz, M.Sc. Student of Arabian Gulf University, Bahrain did his all RS and GIS work under my supervision as an exchange student (August 2004).
- Data order and procurement, download, rectification and image processing of ASTER, IKONOS, TM & ETM, SPOT and RADARSAT data.
- Real Time Ground truth data collection and image processing, interpretation and reports.

### **Completed Projects**

- Desert mangrove change detection and ecosystem analysis for the establishment of Al Dhakhira Nature Park.
- Urban growth pattern and its impacts in and around Doha City during 1972-2002 using Landsat TM/ETM data from 1972, 1985, 2000 and 2002.
- "Environmental Monitoring of coastal water at Ras Laffan Industrial City using latest ASTER-MODIS Data with RASGAS.
- Policy and management guidelines developed for it based on Landsat ETM and SPOT 5 multi dates image analysis, IUCN guidelines and other relevant international protocols.
- Biodiversity assessment and vegetation mapping for Qatar using Landsat, MSS, TM & ETM data.
- Landsat TM & ETM and MEIS data utilized for Environmental monitoring in Messaid (MIC) and Ras Laffan (RLC) Industrial cities and their off shore water.
- Monitoring coastal environment (sea surface temperature, vegetation, coral reefs) gas exploration and infrastructure development using Landsat TM & ETM data of 1985 to 2002.

#### ***June 2001 - April 2002***

*Remote Sensing and GIS Analyst, Centre for Environment and GIS,  
(www.cegisbd.com) Dhaka, Bangladesh*

- Prepare project proposal for various sectors as required by the sponsors. Data order and procurement, download, rectification and processing of IKONOS, IRS, SPOT, TM & ETM and RADARSAT data.
- Real Time Ground truth and image processing, interpretation and reports on results.
- **Project Leader**-Settlement and infrastructure mapping for Bangladesh using IRS data.
- **Project Leader**-RADARSAT data used for land use zoning of South Western Bangladesh.
- **Project Leader**-Monitoring bank movement of 5km upper and lower stream of Jamuna Multipurpose Bridge.
- Prototype model developed for Flood Monitoring, cropping pattern monitoring in the Southwest region of Bangladesh using RADARSAT images.
- **Project Leader**-Ganges river channel migration using Landsat MSS, TM & ETM, 1973-2002.
- **Project Leader**-Channel dynamics of Padma-Meghna river systems utilising RADARSAT data with bank line from ETM data.

#### ***September 1999-June 2001***

*Assistant Conservator of Forests, Resource Information Management Systems (RIMS)  
Bangladesh Forest Department, Dhaka, Bangladesh (Period of NFP Fellowship)*

- Worked as Remote Sensing and GIS Specialist under Sundarbans Biodiversity Conservation Project, Forestry Sector project and Hill Tracts Afforestation Project.
- Processing, analysis and interpretation of SPOT and Landsat-TM data for updating exiting Forest Classification maps, legal boundary and infrastructures maps for Sal forests and Sundarbans mangroves. These also involved GIS analysis of Vegetation classes, water salinity in the Sundarbans.
- Prepare tender document, float tender and evaluation of tender bids for RS & GIS works.
- Building and maintenance of detailed GIS database of Forest Inventories, Forest Classification, Ground Truth data and image processing results along with other environmental data.
- Resource speaker and technical expert in Environmental Conservation Training Program and participatory forestry, GIS programs arranged by Bangladesh Forest Department, World Food Program (WFP), Local Govt. Engineering Department (LGED) and other organizations.
- Administration and management of over 10 officers and 65 field officers, staffs.

#### ***February 1998 – August 1999***

*Assistant Conservator of Forests, Forest Extension Division, Dhaka  
Bangladesh Forest Department, Dhaka, Bangladesh*

- Execution forest extension and participatory forestry programs in Dhaka, Narayanganj, Gazipur and Mainkangj districts. Ensure proper implementation of participatory plantation, management of Forest Resources and plantations.

- Represent BFD Monthly DDC Meeting Dhaka, Narayanganj, Gazipur and Mainkganj districts. Liaise with District and Upazilla Administrative offices. Monthly District Agricultural Development Coordination Committee (DDC) Meeting.
- Organize Annual National Tree Fair (tree, sapling exhibition –national program to aware mass people about environment and trees) as Member Secretary of the Implementation Committee.
- Coordinate with Asian Development (ADB), World Bank (WB), Officials. Coordinate awareness programs to conserve forest and environment.
- Execution of Forest and Environment related government decisions and in the grass root level. Plan participatory forestry and conservation projects implemented by different agencies. Monitoring and evaluation report during and after plantation.
- Design and develop environmental conservation oriented training course for officers from both the Govt. organisation and social forestry participants.
- Resource speaker and technical expert in Environmental Conservation Training Program and participatory forestry, GIS programs arranged by Bangladesh Forest Department, World Food Program (WFP), Local Govt. Engineering Department (LGED) and other organizations.
- Administration and management of over 20 officers and more than hundred other staffs..

### ***March 1993 - February 1998***

*Assistant Conservator of Forests Forest Extension Division Bogra, Bangladesh Forest Department (BFD), Bogra, Bangladesh*

- Joypurhat and part of Bogra districts. 12 officers and other more than hundred staffs. Ensure proper management of Forest Resources and plantations.
- Represent BFD Monthly DDC Meeting. Liaise with District and Sub District Administrative offices. Monthly District Agricultural Development Coordination Committee (DDC) Meeting.
- Coordinate with Asian Development (ADB), World Bank (WB), Officials. Coordinate awareness programs to conserve forest and environment. Organize Annual Tree Fair (tree, sapling exhibition –national program to aware mass people about environment and trees).
- Execution of Forest and Environment related government decisions and in the grass root level. Plan participatory forestry and conservation projects implemented by different agencies. Monitoring and evaluation report during and after plantation.
- Design and develop environmental conservation oriented training course for officers from both the Govt. organisation and social forestry participants.
- Technical expertise in Environmental Conservation Training Program by Bangladesh Forest Department, World Food Program (WFP), Local Govt. Engineering Department (LGED) and other organisations.

## **Publications**

### **International Peer Reviewed Journals and Conference Proceedings**

- Syed, Md. A. and Y. A. Hussin. 2005. Assessing Fragmented Mangroves of the Sundarbans, Bangladesh Using Optical and Radar Satellite Images. Asian Journal of Geoinformatics, Vol. 5, No. 3 (2005) July 2005, ARSRIN, Bangkok, Thailand. [http://intranet.itc.nl/papers/2005/peer\\_jrnl/hussin\\_ass.pdf](http://intranet.itc.nl/papers/2005/peer_jrnl/hussin_ass.pdf)
- Syed, M. A and A. M. Sadiq. 2002. Digital Image Processing for Information Gathering from Remote Sensing Data: Case Study from the State of Qatar, Proceedings of International Arab Conference on Information Technology-ACIT'2002 held at University of Qatar, Doha-Qata <http://www.acit2k.org/sub2002.html? ACIT2002/abstracts2002#211>
- Syed, M. A and A. M. Sadiq. 2002. Assessing Desert Vegetation Cover Using Remotely Sensed Data: A Case Study from the State of Qatar, Proceedings of the Asian Conference on Remote Sensing 2002 (ACRS 2002), Nov 25-29 held in Kathmandu, Nepal <http://www.gisdevelopment.net/aars/acrs/2002/sol/013.pdf>
- Syed, M. A., Y. A. Hussin and M.J.C. Weir. 2001. Detecting Fragmented Mangroves in the Sundarbans, Bangladesh Using Optical and RADAR Satellite Images. Proceedings of the Asian Conference on Remote Sensing 2001, Nov 6-9 held in Singapore. <http://www.crisp.nus.edu.sg/~acrs2001/pdf/018syed.pdf>
- Syed, M. A. 2001. Detecting High Contrast Edges in the Fragmented Mangroves of the Sundarbans, Bangladesh Using JERS-SAR Data. Chittagong University Journal of Sciences, November 2001 issue.

- 
- Syed, M. A. 1997. People's Participation in Planning, Monitoring and Evaluation of Participatory Forestry Programme, Proceedings of XI World Forestry Congress, Anatolia, Turkey, 13 to 22 October 1997
- 

## Publications

### National Reports

- Syed, M. A. 2006. "Remote Sensing and GIS Study of Al Dakhira Desert Mangrove Ecosystem". In final report "Environmental Studies towards the Establishment of Al Dhakhira Nature Park". (Eds. Bari, E. A. and Ansi M. A.) Pp.55-88 (A 33 pages detailed report prepared and submitted to National Committee on Al Dhakhira Nature Reserve Project, which includes almost all onshore and off shore environmental issues.)
- Syed, M. A. 2003. "Assessing Desert Vegetation and Biodiversity in The State of Qatar Using Remotely Sensed Data". In national report "The Qatar National Biodiversity Strategy and Action Plan-Assessment, Biodiversity Inventory". (Eds. Bari, E. A., Bari, A. A., Jassim M. A. and Ansi M. A.) Pp.105-116 (A 10 pages Chapter on Environmental Analysis of Biodiversity issues in Presented to the government and published in April 2004.)
- Syed, M. A. 2004. "Environmental Assessment of MeSaied Coasts". In final report "Ecological Survey of The Marine and Coastal Environment of MeSaied Industrial City". (Eds. Bari, A. A. and Jassim M. A.) Pp.33-44. (An 11 pages Chapter on Environmental Analysis including Sedimentation, industrial effluent discharges, and industrial fumes.)
- 

## Professional membership

- Network Coordinator-CapNet (Cap-Net is an international network for capacity building in integrated water resources management)- South Asia,
- Active Member, ASPRS-The American Society for Photogrammetry & Remote Sensing 5410 Grosvenor Lane, Suite 210 Bethesda, Maryland 20814-2160
- Alumni, International Institute of Geo-information Science and Earth Observation (ITC), The Netherlands
- Asian Remote Sensing Research Information Network (ARSRIN), Bangkok, Thailand, Email: [nattaya@arsrin.net](mailto:nattaya@arsrin.net), Voice: 0066-2-524-639, Fax: 0066-2-524-5597, Website: [www.arsrin.net](http://www.arsrin.net)
- Member, Bangladesh Professional Forestry & Env Sc. Graduates Association. (BPFA)
- World Vetiver Network, World Bank Head Quarters, Washington DC, USA.
- 

## Personal information

- **Interests:** Environmental Conservation campaign, Information Technology, Traveling, Photography, Social services, Technology Reading, researches, Foot ball, badminton, Listening Music, Landscaping and Gardening.
- Date of Birth : 08 August, 1968
- Nationality : Bangladeshi
- Marital Status : Married ( 2 children)
- Driving License: valid Qatari driving license
- 

## Referees

- M. Farid Uddin Ahmed, Executive Director, Arannayk Foundation, House-68, Road-1, Block-I, Banani, Dhaka-1213, Bangladesh, Phone: 880 2 9873275, Fax: 880 2 9873248 E-mail: [farid@arannayk.org](mailto:farid@arannayk.org)
- Dr. Ram A. Sharma, Deputy Chair of Party and Project Area Management Specialist, Nishorgo Support Project, House# 68 (2<sup>nd</sup> floor), Road # 1, Block-I, Banani, Dhaka, Tel: 0088 02-9873229, 9871553, Cell: 0088 01713-011563, E-mail: [ram@irgbd.com](mailto:ram@irgbd.com)