

**Dr. Md. Abu Syed**

Residence: Dhaka, Bangladesh

Contact: House # 10, Road # 16A, Gulshan 1, Dhaka 1212, Bangladesh

Mobile: +8801730019213, **skype:** abu\_syed2001, **Twitter:** @AbusyMdEmail: **mabusyed@gmail.com; abu.syed@bcas.net****SUMMARY**

Currently Fellow of Bangladesh Centre for Advanced Studies (BCAS), Director of NABIC-innovative, dedicated academician and scientist with over 25 years' field level professional; and research experiences in on climate change, climate and ecosystem modeling, assessment, monitoring, participatory mapping, planning, adaptation and natural resources management.

**Personal information****Nationality:** Bangladeshi; **Date of birth:** 05 August 1968**Languages:** Bangla (Mother Tongue), English (Fluent), French/Arabic/Hindi (Conversational)

**Traveled for academic and professional purposes:** Argentina, Austria, Belgium, Bhutan, Brazil, Denmark, Ethiopia, France, Germany, India, Italy, Kenya, Kurdistan, Luxemburg, Maldives, Nepal, the Netherlands, Norway, Oman, Panama, Qatar, Ruanda, Singapore, Sri Lanka, Switzerland, Tanzania, Thailand, United Arab Emirates, United Kingdom, USA etc.

**Social Media Profiles****Facebook:** <https://www.facebook.com/M.AbuSyed>**LinkedIn:** <https://www.linkedin.com/in/geospatialnrmsyed/>**PROFESSIONAL PROFILE**

- ❖ **Adviser** to the "Anticipatory Flood Management to improving flood resilience of Alexandria, Egypt and greater Nile Delta"
- ❖ Adviser to the World Bank Washington team in "Climate Smart Investment Planning for Bangladesh"
- ❖ **Director (Founding), Nansen-Bangladesh International Centre for Coastal and Climate Studies (NABIC):** the Centre of Excellence on coastal and ocean remote sensing & modeling in Bangladesh collaborating with research centers spanning across Europe, China, Russia, India and South Africa
- ❖ **Co-Principal Investigator,** Himalayan Adaptation, Water and Resilience (HI-AWARE) Research on Glacier and Snowpack Dependent River Basins for Improving Livelihoods, covering whole of South Asia and 4 major river basins.
- ❖ **Lead Author,** Assessment on Urban and Peri-urban agriculture and adaptation planning in 9 cities in South Asia, East and West Africa, UNEP
- ❖ **Lead Author,** Himalayan Hindu Kush Regional Ecosystem Assessment, ICIMOD, Kathmandu, Nepal
- ❖ **Member of General Assembly of IMPACT 2C (FP7 project)** responsible for Quantifying impacts of Global warming of 2°C
- ❖ **Adjunct Faculty:** Faculty of Disaster Management, Patuakhali Science and Technology University (PSTU); Shahjalal University Science and Technology (SUST); Institute of Forestry and Environmental Sciences, Chittagong University, Bangladesh
- ❖ **Active Membership** with:
  - The American Society for Photogrammetry and Remote Sensing (ASPRS), 5410 Grosvenor Lane, Suite 210 Bethesda, Maryland 20814-2160
  - International Institute of Geo-information Science and Earth Observation, Netherlands
  - Asian Remote Sensing Research Information Network, Thailand

**Profile:****Leadership, Coordination and multi-country Program management:**

- ❖ Leadership skills in managing multi-disciplinary research team, capacity building and advocacy on geoinformatics, CC and adaptation
- ❖ Over 14 years in collaborative research at international, regional and national level with various types of funding supports.
- ❖ Co-founded the Nansen-Bangladesh International Centre for Coastal and Climate Studies (NABIC)- the Centre of Excellence on coastal and ocean remote sensing & modeling in Bangladesh in collaboration with 5 universities and research centers in Bangladesh & Europe and NANSSEN Centers in China, India, Russia and South Africa established in 2010 in partnership with 7 other Centre of Excellence and 4 universities in Norway, Netherlands and Bangladesh;
- ❖ Leading Landscape Level (geospatial) planning for 36 protected areas both (forest and wetland) considering climate change, ecosystem restoration and community based adaptation. Based on these policy suggestion which were adopted by GOB;
- ❖ Proven record of efficient and effective engagement of human resources in towards achieving institutional and program goal while leading and working as team member as well.
- ❖ Leading 20 professionals of whom many with PhDs and guiding the team along PhD and MSc students while keeping focus on the objectives of respective researches. Flexible and accommodative leadership in managing the human resources while attaining the optimum results ensuring their capacity enhancement and incentivization.
- ❖ Coordinated in Bangladesh and contributed as a Coordinating Lead Author to Assessment on Urban and Peri-urban Agriculture & adaptation planning in 9 (3 in each of South Asia, East and West Africa)-START-Secretariat, Washington, D.C., WMO, UNEP;
- ❖ 1.5 degree in review under IMPACT 2C with World's Leading Scientists. The project study area covers EU, Africa and South Asia. Following publication on;
- ❖ Coordinating or acting as leader of several collaborative research programs/projects with Wageningen University, TU Delft, Twente University, Netherlands, Helsinki University, Finland, Bergen University; Oslo University, Norway, UNU Bonn, AIT Thailand, Tuft University, Smithsonian Institute, Washington; University of Hawaii, USA, and Toronto University, Canada.
- ❖ Proven record of overall guidance and coordination of research in close coordination with other teams or even agencies ensuring interdisciplinary and transdisciplinary work that leads to development outcomes;
- ❖ Proven record of developing appropriate impact pathway and framing monitoring and evaluation accordingly.
- ❖ Proven record of successful coordination among institutions many countries in the global North and South;



**Strategic Program planning, monitoring, and reporting:**

- ❖ Over 20 years of experiences on project planning, designing and implementation on environment, climate change and adaptation at national, regional and international level. Regional and national experiences in developing of research programme/projects on climate change and disaster risk reduction
- ❖ Developed analytical skills and understanding on climate change, assessment of impacts, vulnerability, adaptation and loss and damages, highly used remote sensing, GIS.
- ❖ Skills in monitoring and evaluation of environment, water, wetlands and biodiversity and climate change adaptation. Monitoring of several multi-country projects, climate change, adaptation and relevant research; Worked as National Consultants for GEF, UNDP, ADB, WB funded project for monitoring and evaluation utilizing geospatial sciences;
- ❖ As member of Senior Management Committee at BCAS contributed in developing strategic programs, in preparing institutional work plans and budgets, and where necessary and relevant, ensure linkage/integration among divisions at BCAS and Nansen Network
- ❖ Contributed in Strategic Planning of Scientific research visions of NANSEN Network Institutions for coordinated and integrated research on Indian Ocean and its Bays while research will carried out at different centre at various levels
- ❖ Contributed in strategic planning of several institutions including BCAS, ARCAB, ICCCAD, NABIC, SEALS, DUPC, SHIREE (Stimulating Household Improvements Resulting in Economic Empowerment) etc. Linkage between Poverty and Climate Change, Adverse Effects of Climate Change, Vulnerability context, coping mechanism, mainstreaming climate change into development planning, Conduct training for capacity building training and plan for GED, Planning Commission.
- ❖ Proven record of successful implementation of large action research projects and program involving social sciences as well physical sciences especially geospatial sciences and modeling tools.
- ❖ Successful completion of many projects following highest standard of financial management, accounting and auditing procedure.
- ❖ Proven record of competing many programs and projects in timely manners ensuring quality reports, publications and IEC materials;
- ❖ Ensure timely reporting to donors on projects (technical and financial); also ensure reporting by partners to ICIMOD in a timely manner.

**Engagement with partners and stakeholders**

- ❖ Communities who bear the most brunt of environmental extremes are core in my research conceptualization and planning. Hence, continuous engagements with stakeholders including communities, funding agencies and partners (public & private) had been a focus.
- ❖ Successfully represented various programs, institution (BFD, QU, BCAS and NABIC) at many national and international fora. Developed and maintained communication and partnership fostering constructive dialogue with stakeholders in Asia, SE Asia and Africa towards expected dissemination of results and findings to policy makers at various levels and to international communities.
- ❖ Effectively negotiated technical and financial issues with UNDP, UNEP, WB, ADB, NSO, NOW, MoFA etc

**Collaboration and partnership development**

- ❖ Develop (and support the Initiative Coordinators in the development of) partnerships with national, regional, and global stakeholders for strategic collaboration to contribute to the regional program objectives
- ❖ Led several regional and multi-country, multi-cultural projects while ensuring sustainable regional and national collaboration, partnerships, and networking.
- ❖ Networking and partnership on Climate Change (Coordination with multi-stakeholders at local, national, regional and international level)

**Team and capacity building:**

- ❖ Capacity building among the youths is always my passion and continually run successfully several capacity building projects in geospatial sciences, climate, coastal, ecosystem modeling and adaptation.
- ❖ My all capacity building activities ensured optimum participation of women if not maximum effectively integrated within the program
- ❖ Over 25 years in managing human resources from 20-125 while practicing a positive, flexible, equitable, and professional working environment.
- ❖ Serving as adjunct faculty and mentoring many MPhil, MSc and BSc students while co-supervising PhD research students.

**Fundraising and resource mobilization:**

- ❖ Lead resource mobilization activities to secure expansion of program me funding in close coordination with the Directorate including:
- ❖ Supporting ICIMOD's Directorate in resource mobilization activities to secure expansion of program funding.
- ❖ Writing concept notes and proposals
- ❖ Developing and maintaining constructive dialogue with sponsors whenever required
- ❖ Exploring co-funding opportunities involving regional partners and/or member countries

**Policy analyses and research:**

- ❖ Analyzed national policies on agriculture, water resources and climate for resolving mismatches, conflicts among policies and mainstreaming climate change into the development planning. Worked with government ministries and development agencies.
- ❖ Contributed in reviews of policies on Forest and Natural Resources Management and formulation of new policies for social forestry, participatory co-management of forests and Hilsha conservation policies (EcoFish), fisheries resources, agriculture, water resources and climate analyzed for resolving mismatches, conflicts among policies and mainstreaming climate change into the development planning (DMIN, GED project, CoCoon, START).

**EMPLOYMENT HISTORY and KEY RESEARCHES**

Projects	Achievements and Responsibilities
<b>Bangladesh Climate Smart Investment Plan for Bangladesh (which would</b>	<b>Adviser:</b> Facilitate WB CSIP team in taking onboard different ministries of the Government of Bangladesh, to develop a Bangladesh Climate Smart Investment Plan to inform agriculture sector planning, foster dialogue, and build capacity concerned sectoral



<p><b>eventually expanded to other Asian countries)</b></p>	<p>departments of the government; to operationalize country climate commitments for a productive, resilient, and low-emissions agriculture sector development in the short and medium/longer term.</p>
<p><b>Setup of Nansen-Bangladesh International Centre for Coastal, Ocean and Climate Studies (NABIC)</b></p> <p>Establishing the institution, capacity building of Bangladeshi post universities in environment, ocean, coastal and marine ecosystem remote sensing, GIS studies</p> <p>Date: Sep 2009- Sep 2019</p>	<p><b>Founder and Director and member of International Advisory Board and Nansen Centre Networks Scientific Council</b> of this international centers of excellence and coordinating the development of research facilities for oceanographic, coastal and climate modeling and remote sensing in Bangladesh in collaboration with 5 universities</p> <ul style="list-style-type: none"> <li>• Planning, designing and assist in organizing and selecting candidates for PhD, post-doctoral, short courses students and conducting courses on environmental modeling, remote sensing and GIS;</li> <li>• Conduct course on high resolution remote sensing and modeling;</li> <li>• Participation in planning and designing future action research.</li> <li>• Strategic Planning of Scientific research visions of NANSSEN Network Institutions for coordinated and integrated research on Indian Ocean and its Bays while research going carried out at different centers.</li> <li>• Coordination and negotiation of technical and fund raising issues with international development partners especially Ministry of Foreign Affairs, Norway, NERSC, Bergen University, NASA, USAID-Washington and Bangladesh, Nippon Foundation, Japan for sustainable NABIC.</li> </ul>
<p><b>Himalayan Adaptation, Water and Resilience (HI-AWARE)</b></p> <p>Research on Glacier and Snowpack Dependent River Basins for Improving Livelihoods, covering whole of South Asia</p> <p>Date: Mar 2014-Mar 2018</p>	<p><b>Co-Principal Investigator,</b></p> <ul style="list-style-type: none"> <li>• Generate science-based knowledge on the biophysical, socio-economic, gender, and governance conditions and drivers leading to vulnerability to climate change impacts.</li> <li>• Working on out-scale, upscale Climate and Flood Resilient Habitat piloted under HI-AWARE and the uptake of the robust evidence generated at various scales through the development of synergies between science-based knowledge and adaptation practices of communities.</li> <li>• Taking these to review process of Bangladesh Climate Change Strategy and Action Plan</li> <li>• Participatory vulnerability; and land use mapping using GeoEye 1 (0.5m) data</li> <li>• Policy analysis, gap identification and recommendation for Planning Commission, Bangladesh and India, SAARC Secretariat.</li> </ul>
<p><b>Transforming Climate Knowledge with and for Society (TRACKS)</b></p> <p>Client: University of Bergen, Norway and Norwegian Embassy</p> <p>Date: Mar 2014-Sep 2017</p>	<p><b>Chief Climate Modeler and Team Leader</b></p> <ul style="list-style-type: none"> <li>• Mobilizing high-quality knowledge on climate variability with communities in northeast Bangladesh</li> <li>• Initiate an innovative 'post-normal science approach' that brings together scientific and local narratives to mobilize high-quality knowledge on climate</li> <li>• Explore the relationship between scientific and local narratives of climate variability and its impacts on communities in northeast Bangladesh, to promote a robust understanding based on high-quality climate and local knowledge.</li> <li>• Synergy of physical climate modeling and "post-normal" or "citizen science"</li> </ul>
<p><b>Quantifying Project Impacts Under 2°C Warming (IMPACT2C)</b></p> <p>Client: FP7, European Union</p> <p>Date: Jun 2011-Jun 2016</p>	<p><b>Team Leader</b></p> <p>IMPACT2C integrates and synthesizes project findings suitable for awareness raising.</p> <ul style="list-style-type: none"> <li>• Leading South Asia (Bangladesh &amp; Maldives) component of the modeling and impact study of this collaborative research project led by Helmholtz-Zentrum Geesthacht Zentrum für Materialund Küstenforschung GmbH, Climate Service Center/ HZG, Germany</li> <li>• Lead the project development process and planned execution in South Asia, Bangladesh and Maldives.</li> <li>• Science policy Dialogue in Bangladesh and Maldives and policy recommendations</li> </ul>
<p><b>Climate-Resilient Ecosystems and Livelihoods (CREL)</b></p> <p>Geospatial planning, NRM policy analyses, co-management of NRM</p> <p>Client: Winrock International and USAID, Bangladesh Forest Dept. Fisheries Dept.</p> <p>Date: Mar 2011-Sep 2016</p>	<p><b>GIS and Geospatial Planning Specialist</b></p> <ul style="list-style-type: none"> <li>• Climate modeling, Landscape Level Planning (LLP), remote sensing and participatory GIS mapping for strengthened geospatial planning and implementation of climate-resilient forest management through, NRM and adaptation options for 35 select forest and wetland Protected Areas (PAs);</li> <li>• Carbon inventory, Standard Procedure of Operation for inventory, biophysical survey, decadal change analysis forest and wetland for carbon assessment, REDD+</li> <li>• Enhanced knowledge and capacity of key stakeholders (national level down to communities) for addressing policy gap.</li> <li>• Improved diversified livelihoods that are environmentally sustainable &amp; resilient to cc</li> </ul>
<p><b>Understanding the Findings of the IPCC Fourth Assessment Report 2007 – Integrating CC Adaptation and Mitigation in Development Planning</b></p>	<p><b>Team Leader and Lead Author on Land use, land cover change in urbanization which is a large RS &amp;GIS mapping exercise.</b></p> <ul style="list-style-type: none"> <li>• (i) Regional knowledge sharing strategies; (ii) Regional &amp; National Science-Policy Dialogues; (iii) Conduct training seminars and (iv) Undertake regional knowledge assessments.</li> </ul>



<p><b>Clients:</b> SysTem for Analysis, Research &amp; Training (START), Washington, UNFCC, WMO, UNEP, WMO,</p> <p><b>Date:</b> Jul 2009-Mar 2013</p>	<ul style="list-style-type: none"> <li>• Coordination of South Asia regional assessment on urban and peri-urban Agriculture production and Food Security of Growing population 3 cities in South Asia, 3 in East and 3 in West Africa</li> <li>• Lead mapping exercise using GeoEye 1 data for Greater Dhaka city and wrote reports by Lead Authors (who are senior and internationally acclaimed professors in their respective fields) on climate change, impacts, vulnerability and adaptation</li> <li>• As a Lead Author of two chapters of a planned book from this titled "Dhaka City and Climate Change" I am writing two chapters.</li> </ul>
<p>Impacts of Climate Change on Poverty and Economic Growth and the Options of Coping with the Adverse Effects of CC in Bangladesh-Mainstreaming CC into Development Planning</p> <p><b>Clients:</b> Planning Commission, Bangladesh Government, UNDP</p> <p><b>Date:</b> Jul 2009-Dec 2012</p>	<p><b>Climate Change Specialist</b></p> <ul style="list-style-type: none"> <li>• Based on the conceptual framework and analyzing available literature on climate change and poverty including PRSP (Bangladesh Poverty Reduction Strategy Paper), National Strategy for Accelerated Poverty Reduction (NSAPR) and Millennium Development Goals (MDGs), strategies have been developed to deal with adverse impacts of climate change which will enhance the adaptive capacity of the vulnerable sectors and communities.</li> <li>• Captured expert knowledge and understanding on impacts of cc on different sectors, impacts of economic growth and strategies with actions;</li> <li>• This strategy documents include policy and advocacy tools which enhanced capacity of General Economic Division (GED), Planning Commission to address climate change (cc) issues and impacts in their planning process.</li> <li>• Conduct capacity building training and plan for GED, Planning Commission;</li> </ul>
<p><b>Capacity Building and Strengthening of Awareness among young scientist in Bangladesh on Geo-Information science (RS &amp;GIS)</b>-young scientist capacity building</p> <p><b>Client:</b> ICIMOD</p> <p><b>Date:</b> Dec 2011-Dec 2014</p>	<p><b>Team Leader</b></p> <ul style="list-style-type: none"> <li>• Program planning, project development and management. Successful execution of SERVIR Himalaya Bangladesh Youth Forums 2012 and 2014.</li> <li>• Coordinate with country' most senior environment and NRM experts for their motivational talks;</li> <li>• Conduct week long training and awareness program, so that they understand how they can utilize RS &amp; GIS in their higher study, research and professional works;</li> <li>• Successful completion of Decision Support Tool (DST) for Forest Protected Areas in Bangladesh under SERVIR Himalaya Bangladesh by Dec 2014.</li> </ul>
<p><b>Remote Sensing and GIS Mapping Support to Investment Planning for Sustainable Management and Eco-restoration of Protected Areas (PAs) and Ecologically Critical Areas (ECA) in Four Select Landscapes in Bangladesh;</b></p> <p>RS, GIS, forest mapping and REDD project development, investment plan</p> <p><b>Client:</b> Widemann Associates Inc. (WAI), Arlington, USA and USAID-Bangladesh</p> <p><b>Date:</b> Mar 2009- Dec 2010</p>	<p><b>Team Leader (Remote Sensing and GIS Specialist)</b></p> <ul style="list-style-type: none"> <li>• The project developed a methodology for "Investment Planning for Forest Resources Management and Intervention at Landscape Level" in 4 select landscapes 1300 sq.km. for REDD, REDD+</li> <li>• Coordination with WAI, USA and USAID-Bangladesh. All RS &amp; GIS analysis to (i) mainstreaming climate change and environment in protected area conservation and sustainable management towards eco-restoration;</li> <li>• Coordinate with Ministry of Environment &amp; Forests, Bangladesh Forest Department,</li> <li>• Organized national, sub-national and community consultations to understand the relationship between forest ecosystem and people surrounding the habitat and finalization of report writing. Prototype landscape level investment plan for protected areas and ecologically critical areas through co-management approach for community based adaptation climate change impacts.</li> <li>• Poverty reduction of the neighboring and dependent population with popular participation in Co-Management Model with provision for alternative income generation/livelihood options.</li> </ul>
<p><b>Disaster Management Information Network (DMIN), Design, Test and Demonstrate a DMIN down to household level.</b></p> <p>Clients: Comprehensive Disaster Management Program (CDMP) ADPC &amp; CDMP.</p> <p><b>Date:</b> May 2008 to Jul 2010</p>	<p><b>Technical Coordinator for DMIN (Disaster Management Information Network)</b></p> <ul style="list-style-type: none"> <li>• Down to Household Level involved in developing, testing and implementation" for Comprehensive Disaster Management Program, Bangladesh. Based on the design a national level integrated Disaster Management Information Centre (DMIC) was establish to automatically integrate all early warning (EW) information, generate and disseminate EW.</li> <li>• Mapping of different hazards and identify most vulnerable districts and upazilas for house hold survey on disaster management and early warning issues.</li> <li>• This involves extensive use of remote sensing and Participatory GIS for different hazard mapping and risk zoning.</li> <li>• Institutional (district, sub-district and union) level consultations and gap analysis; Institutional capacity building on Early Warning communication at all levels.</li> </ul>
<p>Qatar University, Doha, Qatar</p> <p>Lead Remote Sensing and GIS lab. Conduct undergraduate courses in RS and GIS. Develop project concept and proposal, technical negotiation with clients (most multinational petroleum</p>	<p><b>Assistant Professor (RS &amp; GIS, Environmental Monitoring)</b></p> <ul style="list-style-type: none"> <li>• Conduct undergraduate and graduate classes on Remote Sensing, GIS and cartography. Guided 2 PhD and 5 M.Sc. researches of exchange students.</li> </ul> <p>Completed Major Remote Sensing and GIS Projects:</p> <ul style="list-style-type: none"> <li>• Desert mangrove change detection and ecosystem analysis towards establishing Al Dhakhira Nature Park. Land use and park management plan development for Al Dhakhira NP. Policy and management guidelines developed for it based on Landsat ETM and SPOT 5 multi dates image analysis, IUCN guidelines and other protocols.</li> <li>• Detail aerial survey were planned and carried out with MEIS sensor onboard. "Environmental Index Mapping" and "Coastal Environmental Atlas" produced.</li> </ul>



<p>companies). Guide M.Ss. and PhD students GIS works. RS and GIS data analysis for different consultancy projects.</p> <p><b>Date:</b> April 2002 – Jan 2008</p>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• “Environmental Monitoring of coastal water at Ras Laffan Industrial City using ASTER-MODIS Data with RASGAS. Sea Surface Temperature and Sedimentation Pattern mapping in the coast.</li> <li>• Biodiversity assessment and vegetation mapping of Qatar (times series 1972-2006 Landsat, MSS, TM &amp; ETM data).</li> <li>• Landsat TM &amp; ETM and MEIS data utilized for Environmental monitoring in Messaid (MIC) and Ras Laffan (RLC) Industrial cities and their off shore water.</li> <li>• Monitoring coastal environment (SST, vegetation, coral reefs) gas exploration and infrastructure development using Landsat TM &amp; ETM data of 1985 to 2002.</li> </ul>
<p><b>Client:</b> Centre for Environment and GIS (CEGIS) Cropping pattern in the south west region from RADASAT and ETM data. Settlement and Infrastructure Mapping and Modeling for Bangladesh using IRS data. Model bank erosion of Jamuna and optimum bridge length</p> <p>Bank lines of Padma-Meghna for Padma optimum bridge length of the bridge.</p> <p><b>Date:</b> Apr 2001-Apr 2002</p>	<p><b>Remote Sensing and GIS Expert/ Project Leader</b></p> <ul style="list-style-type: none"> <li>• Lead the team to procure, analyze and generate maps of settlements and infrastructures in the Chittagong Hill Tracts area.</li> <li>• Data order and procurement, download, rectification and processing of IKONOS, IRS, SPOT, TM &amp; ETM, SPOT and RADARSAT data. Real Time Ground truth and image processing, interpretation and reports on results.</li> <li>• Landsat ETM and RADASAT data procured and analyzed. Cropping pattern in different seasons was developed through image, GIS analysis and ground truth data for monitoring Cropping Pattern in the Southwest region of Bangladesh;</li> <li>• Development of Prototype Model for Flood Monitoring;</li> <li>• Generate GIS layers of bank lines of Jamuna river for 4 decades to monitor and model the river bank erosion in the upper and lower stream of the bridge;</li> <li>• Channel migration analysis of Jamuna, Brahmaputra studied using time series satellite data;</li> <li>• Map of predicted erosion in both rivers were produced River Training works for 5.6km Jamuna Multipurpose Bridge;</li> <li>• Identify optimum width of Jamuna River for the bridge.</li> <li>• GIS Analysis of Bank line vector files generated from TM/ETM data Channel dynamics of Padma-Meghna river systems utilizing TM/ETM data.</li> <li>• GIS analyses were done map Channel migration of Padma-Meghna river systems Jamuna and Brahmaputra. Landsat images were processed to produce temporal bank line of Padma-Meghna river system.</li> </ul>
<p>Bangladesh Forest Department (BFD), Ministry of Environment and Forest,</p> <p>Management of participatory forestry program, represent BFD &amp; MOEF</p> <p><b>Client:</b> BFD.</p> <p><b>Date:</b> Mar 1993 – Aug 1999</p>	<p><b>Assistant Conservator of Forests</b></p> <ul style="list-style-type: none"> <li>• Monitoring and evaluation report during and after plantation. Management of forest resources, plantations and nurseries in Bogra, Dhaka, Gazipur, Joypurhat and Narayanganj districts. 15 officers and other more than hundred staffs. Represent BFD Monthly DDC Meetings.</li> <li>• Liaise with District and Sub District Administrative offices. Monthly District Agricultural Development Coordination Committee (DDC) Meeting. Coordinate with Asian Development (ADB), World Bank (WB).</li> <li>• 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.</li> </ul>

## **EDUCATION**

### ❖ PhD research title "**Geospatial Response to Global Warming in the Tropical Forest Ecosystems in Bangladesh**

The climate modeling research carried out at Bjerknes Centre for Climate Research (BCCR), Bergen University, Norway and ecosystem research at BCAS and Institute of Forestry & Envir Sc, University of Chittagong, Bangladesh 2009-2014. The research starts with GCM downscaling to South Asian regional model applying WRF (Weather Research Forecast) model and nesting to further higher resolution. A modeling framework through identifying appropriate and tested model configurations for high resolution downscaling of WRF model over South Asia and Bangladesh was developed. A geospatial model has also been developed for analyzing climate parameters and visualizing geospatial responses at different ecosystems in Bangladesh. July 2009-Nov 20014

❖ 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), 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 optical & microwave sensor capability in detecting stand parameters. Spatial analysis of environmental factors (natural and human interference) affecting mangrove ecosystem done.

❖ Post-Graduate Diploma in Geomatic Engineering for Integrated Coastal Zone Management (ICZM), University of new Castle Up on Tyne, UK. 2001

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

### **Select PUBLICATIONS: Refereed Journal Articles (most relevant ones)**

❖ Arthur. F. Lutz, Herbert W. ter Maat, René R. Wijngaard, Hester Biemans, **Abu Syed**, Arun B. Shrestha, Walter W. Immerzeel 2017. South Asian river basins in a 1.5 °C warmer world, Regional Environmental Change, under review



- ❖ Bladon, A, **Syed, A**, Hassan, SM T, Raihan, A T, Uddin, N, Ali, L, Ali, S, Hussein, B, Mohammed, E Y, Porras, I, Steele, P (2016) Finding evidence for the impact of incentive-based hilsa fishery management in Bangladesh: combining theory testing and remote sensing methods. IIED Working Paper. IIED, London. <http://pubs.iied.org/16625IIED ISBN 978-1-78431-424-8>
- ❖ Arfanuzzaman, M. and Syed, M.A. Water Demand and Ecosystem Nexus in the Transboundary River Basin: A Zero-sum Game, *Environment, Development and Sustainability*, Springer (Africa, Asia & Europe), doi:10.1007/s10668-017-9915-y
- ❖ Syed, M.A.; Al Amin, M. Geospatial Modeling for Investigating Spatial Pattern and Change Trend of Temperature and Rainfall. *Climate* 2016, 4, 21. <http://www.mdpi.com/2225-1154/4/2/21>
- ❖ Arfanuzzaman, M. Mamnun, N. Islam, M.S. Dilshad, T and **Syed, M.A.** 2016. Evaluation of Adaptation Practices in the Agriculture Sector of Bangladesh: An Ecosystem Based Assessment, *Climate* 2016, 4, 11, doi:10.3390/cli4010011
- ❖ Wesselink, A.; Warner, J.F.; **Syed, M.A.**; Chan, F.; Tran, D.D.; Huq, H.; Huthoff, F.; Thuy, N. Le; Pinter, N.; Staveren, M.F. van; Wester, P.; Zegwaard, A. *International Journal of Water Governance* 3 (2015)4. - ISSN 2211-4491 - p. 25 - 46. [http://www.internationalwatergovernance.com/index.php?option=com\\_content&view=article&id=215:doi-10756415-ijwg90&catid=44:international-journal-of-water-governance](http://www.internationalwatergovernance.com/index.php?option=com_content&view=article&id=215:doi-10756415-ijwg90&catid=44:international-journal-of-water-governance)
- ❖ Reeve, M.S. **Syed, M.A.** Spengler, T. and Spinney, J. 2014. Complementing Scientific Monsoon Definitions with Social perceptions in Bangladesh, *Bulletin of the American Meteorological Society (BAMS)*, June 2, 2014, <http://journals.ametsoc.org/doi/pdf/10.1175/BAMS-D-13-00144.1>
- ❖ Matin, N. **Syed, M.A.** Musingo T. E. Mbuvi, Odit, B.O. and Ongugo, P.O. 2014. Group Inequality and Environmental Sustainability: Insights from Bangladesh and Kenyan Forest Commons, *Sustainability*, Vol. 6, 1462-1488; doi:10.3390/su6031462
- ❖ **Syed, M.A.** 2015. Regional analysis, import-export and related issues on food security, Chapter 7 in *Food Security and Risk Reduction in Bangladesh*, Eds. Umma Habiba, Md. Anwarul Abedin, Abu Wali Raghieb Hassan, Rajib Shaw, Springer Japan KK, Tokyo
- ❖ Matin, N. **Syed, M.A.** Musingo T. E. Mbuvi, Odit, B.O. and Ongugo, P.O. 2014. Group Inequality and Environmental Sustainability: Insights from Bangladesh and Kenyan Forest Commons, *Sustainability*, Vol. 6, 1462-1488; doi:10.3390/su6031462
- ❖ Akhter, S. Raihan, F. Sohel, M.S.I. **Syed, M.A.** Das, S.K. and Alamgir, M. 2013, Coping with Climate Change by Using Indigenous Knowledge of Ethnic Communities from in and around Lawachara National Park of Bangladesh, *Journal of Forest Science*, Vol. 29, No. 3, pp. 181-193, August, 2013, pISSN: 2287-2396, eISSN: 2287-240X
- ❖ Arfanuzzaman, M. and **Syed, M.A.** Water Demand and Ecosystem Nexus in the Transboundary River Basin: A Zero-sum Game, *Environment, Development and Sustainability*, Springer (Africa, Asia & Europe) <http://link.springer.com/journal/10668>
- ❖ Arfanuzzaman, M. Mamnun, N. Islam, M.S. Dilshad, T and **Syed, M.A.** 2016. Evaluation of Adaptation Practices in the Agriculture Sector of Bangladesh: An Ecosystem Based Assessment, *Climate* 2016, 4, 11, doi:10.3390/cli4010011
- ❖ Wesselink, A. Warner, J.Chan, F. Tran, D.D. Huq, H. Terpstra, T. Thuy, N.L. Staveren, M. Syed, M.A and Zegwaard, A. 2015. Soft flood risk management in deltas around the world: can we learn lessons from comparison? Special Issue by Jacobii/Empinotti/Warner of *International Journal for Water Governance*. [http://www.internationalwatergovernance.com/index.php?option=com\\_content&view=article&id=215:doi-10756415-ijwg90&catid=44:international-journal-of-water-governance](http://www.internationalwatergovernance.com/index.php?option=com_content&view=article&id=215:doi-10756415-ijwg90&catid=44:international-journal-of-water-governance)
- ❖ **Syed, M.A.** Al Amin, M. Rahman, A. and Mallick, D. 2015. Synergies of Remote Sensing with Social Science Tools for Participatory, Management of Natural Resources, ASPRS – The Imaging and Geospatial Information Society, 5410 Grosvenor Lane, Suite 210, Bethesda, MD 20814 USA
- ❖ Reeve, M.S. **Syed, M.A.** Spengler, T. and Spinney, J. 2014. Complementing Scientific Monsoon Definitions with Social perceptions in Bangladesh, *Bulletin of the American Meteorological Society (BAMS)*, June 2, 2014, <http://journals.ametsoc.org/doi/pdf/10.1175/BAMS-D-13-00144.1>
- ❖ **Syed, M.A.** 2014. Low Emission Development in Forestry Sector in Bangladesh, A Chapter in the Special Edition titled "Understanding the Low Emission Development", by *International Food Policy Research Institute (IFPRI)*, Washington,
- ❖ Akhter, S. Raihan, F. Sohel, M.S.I. **Syed, M.A.** Das, S.K. and Alamgir, M. 2013, Coping with Climate Change by Using Indigenous Knowledge of Ethnic Communities from in and around Lawachara National Park of Bangladesh, *Journal of Forest Science*, Vol. 29, No. 3, pp. 181-193, August, 2013, pISSN: 2287-2396, eISSN: 2287-240X
- ❖ Reeve, A. M, Spengler, T. Lunde, T.M. and **Syed, M.A.** 2012. Hva er egentlig monsunen? ("What comes to your mind when you hear the word monsoon?") *Climate Journal KLIMA of CICERO*, 3-2012, Oslo, Norway, <http://www.cicero.uio.no/fulltext/index.aspx?id=9461&lang=no>
- ❖ Syed, M.A. Rahman, A.K.M. Atiqur. Maainuddin, G. and Ahmed, A. K. 2012. Disaster Management Information Network – Community Based Multi-hazard Early Warning Information Communication process for Bangladesh; *Global Risk Forum*, Davos, Switzerland
- ❖ **Syed, Md A.** and Shahabuddin, 2012 in press "Changing Trend and Relation between Temperature and Rainfall in Bangladesh" presented in the International Conference on "Opportunities and Challenges in Monsoon Prediction in a Changing Climate" (OCHAMP-2012), 21-25 February, 2012 Pune, India in press-*ELSEVIER special issue*
- ❖ Amin, S. M. A. Rahman, A.A. and **Syed, M.A.** 2012, Opportunities and Challenges of Urban and Peri-Urban Agriculture (UPA): A Critical Analysis of Policy and Urban Governance of Dhaka City, *International Conference on UP Environment* 2012, Pune, India
- ❖ 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, Qatar <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. Hussein 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.
- ❖ 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
- ❖ **Syed, M.A.** and Al Amin, M 2010. Landscape Level Planning towards Developing a Decision Support System for Sustainable Management and Eco-restoration of Protected Areas (PAs), Proceedings of "International symposium Benefiting from earth Observation-Bridging the Gap for Adaptation to Climate Change in the Hindu Kush-Himalayan Region, 4-6 October 2010, International Centre for Integrated Mountain Development (ICIMOD), Katmandu, Nepal
- ❖ Syed, Md. A. 2010. Landscape Level Planning towards Eco-restoration and Biodiversity Conservation: A Case Study from Teknaf Wildlife Sanctuary, Technical Paper: International Day on Biological Diversity, Conference Hall, Bangladesh Forest Department, Agargaon, Dhaka, May 22, 2010
- ❖ Syed, Md. A. 2010. Climate Change: Impacts on Biodiversity, World Environment Day Celebration National Level Technical Discussion Session, Bangabandhu International Conference Centre Dhaka, 06 June. 2010
- ❖ Syed, Md. A. 2010. High Resolution Data Needs for Downscaling ARW-WRF for South Asia, Proceedings of the WRF Lecture Series at the Bjerknes Centre on Downscaling of ARW-WRF, (NCAR Visit to the Bjerknes Centre), Bjerknes Centre for Climate Research, Bergen, Norway September 20-24, 2010

#### **National Reports**

- ❖ Syed, M.A. 2016. Post-2015 Development Agenda: civil society position in Bangladesh, The General Economic Division, Planning Commission, the Government of the People's Republic of Bangladesh and Christian Aid UK.
- ❖ Syed, M.A. 2016. The path to development, The Daily Dhaka Tribune, February 11, 2016, <http://www.dhakatribune.com/long-form/2016/feb/11/path-development>
- ❖ Syed, M.A. 2016. The path to development, The Daily Dhaka Tribune, February 10, 2016, <http://www.dhakatribune.com/long-form/2016/feb/10/path-development>
- ❖ Syed, M.A. (as Lead Author and Editor-with 9 Lead Authors with National Top Experts in their respective areas and 3 contributing authors), Knowledge Assessments on Climate Change and Peri-urban/Urban Agriculture in South Asia, UNEP
- ❖ Syed, M.A. (as one of the principal researcher), Project Completion Report for DMIN (CDMP5b1) support project, Comprehensive Disaster Management Programme (Component 5b), Support for a Disaster Management Information network (DMINN) Report on Communication Ready Certification: A post evaluation of DMIN pilot field testing, CDMP Support for a Disaster Management Information network (DMIN)
- ❖ Syed, M.A. (as one of the principal researcher and Technical Coordinator of the project), Report on Communication Mapping and Planning at Community Levels, CDMP-Component 5b-1 Support for DMIN
- ❖ Syed, M.A. (as one of the principal researcher) The Probable Impacts of Climate Change on Poverty and Economic Growth and the Options of Coping with Adverse Effect of Climate Change in Bangladesh, General Economic Division, Planning Commission And United Nations Development Programme (UNDP)
- ❖ 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,
- ❖ 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.)

