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Department of Environment and Development Studies, United International University,
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Education

PhD (2016) in Environmental Management: **The University of Queensland**, Australia

– **Thesis:** *Shifting cultivation in the upland secondary forests of the Philippines: biodiversity and carbon stock assessment, and ecosystem services trade-offs in land-use decisions*

PGDip. (2012) in Climate Change and Clean Development Mechanism: **The World Bank Institute**, USA

M.Sc. (2011) in Agricultural Development: **University of Copenhagen**, Denmark

– **Thesis:** *Swidden cultivation among two Chepang communities in the central hill districts of Nepal: local perceptions and factors influencing change*

M.Sc. (2010) in Tropical Forestry and Management: **Technische Universität Dresden**, Germany

M.Sc. (2006) in Forestry: **Shahjalal University of Science and Technology**, Bangladesh

– **Thesis:** *Ecological trade-offs between biodiversity conservation, agroforestry land-use, and management intensification - case study from Lawachara National Park, Bangladesh*

B.Sc. (Hons.) (2005) in Forestry: **Shahjalal University of Science and Technology** (SUST), Bangladesh

– **Thesis:** *Bridging livelihoods and forest conservation in protected areas: Exploring the role and scope of non-timber forest products, Experience from Satchari National Park, Bangladesh*

Employment

Associate Professor: Department of Environment and Development Studies, United International University, Dhaka, Bangladesh (January 2023-);

Head: Department of Environment and Development Studies, United International University, Dhaka, Bangladesh (June 2023-July 2024);

Courtesy Research Associate Professor: Department of Earth and Environment, Florida International University, Miami, USA (June 2020-);

Adjunct Senior Research Fellow: Tropical Forests and People Research Centre, University of the Sunshine Coast, Maroochydore DC, Queensland, Australia (May 2020-);

Postdoctoral Fellow: Tropical Forests and People Research Centre, University of the Sunshine Coast, Maroochydore DC, Queensland, Australia (October 2018-April 2020);

Assistant Professor: Department of Environmental Management, Independent University, Bangladesh (January 2017-August 2019);

Postdoctoral Scientist: School of Agriculture and Food Sciences, The University of Queensland, Australia (September 2015-December 2016);

Academic Supervisor: School of Geography, Planning and Environmental Management, The University of Queensland, Australia (July 2014 - October 2016);

Research Fellow: Australian Centre for International Agricultural Research (ACIAR) (January 2012 - December 2016).

Other Affiliations

Senior Policy and Institutional Expert (October 2023-April 2024): The World Bank (Bangladesh Office) towards Developing a Strategic and Tactical Planning System for the Coastal Greenbelt of Bangladesh.

National Consultant, Forestry and Nature-based Solutions (April 2021-June 2023): UN Food and Agriculture Organization (FAO), Bangladesh Country Office towards the Coastal Embankment Improvement Project Phase 1 (CEIP-1) – a 425M USD worth World Bank-funded project.

Nature-based Solutions Design Specialist (October 2022- April 2023): Shell Eastern Petroleum Ltd., Singapore towards Pre-feasibility Assessment of Carbon Offset Projects in Bangladesh;

Protected Area Management Specialist (November 2022-April 2023): USAID Protibesh Activity towards a study titled – Assessment of Nishorgo Protected Area Network in Bangladesh;

National Consultant, Nature-based Solutions (January 2022-November 2022): Asian Development Bank (ADB) Coastal Towns Climate Resilience Project (CTCRP) – a 250M USD worth ADB-funded project.

International Consultant (January 2022-October 2022): Organization for Economic Cooperation and Development (OECD), France towards a study titled – Ecosystem Study for OECD Climate Change Adaptation Program (Sundarbans);

National Wetland and Biodiversity Conservation Specialist (March 2021-February 2022): United Nations Development Program (UNDP) towards the project on Ecosystem-based Management of Tanguar Haor Wetland of Bangladesh;

Forest and Landscape Restoration Consultant (November 2020-April 2021): Mongabay.com for a study titled – Assessing the effectiveness of global forest restoration projects;

National Consultant (March 2019-December 2019): The Nature Conservancy and Centre for Global Development (USA) towards a study titled — Creating opportunities for Rohingya refugees and hosts through Forest and Landscape Restoration in Cox's Bazar, Bangladesh.

National Forestry Expert and Steering Committee Member (January 2018- December 2018): International Organization for Migration (IOM) and International Centre for Climate Change and Development (ICCCAD) towards Monitoring Environmental Changes in Cox's Bazar following the Rohingya Influx (MECCRI);

International Consultant (February-October 2015): The World Bank Group towards Developing a novel carbon payment scheme for improved livelihoods and better management of swidden fallow secondary forests in developing tropics.

Significant Honors, Awards and Distinctions

Outstanding Peer-Reviewed Paper Award (2019): by the Mississippi (USA) Chapter of the Wildlife Society;

Student Award for Excellence in Forest Sciences (2015): by the International Union for Forest Research Organizations (IUFRO) for outstanding academic achievement in forestry;

FLARE Network Best Publication Award (2015): by the University of Michigan, USA;

Young Scientist Research Award (2014): by the Commonwealth Forestry Association, UK;

Best Poster Award on Ecology and Ethics (2011): at Euroleague Scientific Students Conference;

University Merit Scholarship (2005): for Academic Excellence at Shahjalal University of Science and Technology, Bangladesh.

Publications

I have published 92 peer-reviewed articles in journals like *Science* (2), *Nature* (5), *Nature Ecology & Evolution*, *Nature Communications*, *Nature Plants*, *One Earth*, *Science of the Total Environment* (3), *Environmental Science and Policy*, *Ecosystem Services* (2), *Global Ecology and Biogeography* (3). I also have published 2 books and 20 book chapters. I have >7500 citations and an H-index of 36 (with i10-index 82). My research has been featured in The New York Times, CNN, The Independence (UK), Smithsonian Magazine, Mongabay, etc. Key publications include:

Edited books:

Mukul, S.A. (ed.). Forthcoming. ***Forest Management in Bangladesh: Biodiversity, Carbon and Livelihood Outcomes***. Springer, New York, 450 p.

Mukul, S.A., Kazi, S., Huq, S. (eds.). Forthcoming. ***Enhancing Coastal Resilience through Nature-based Solutions in Bangladesh***. Oxford University Press, UK, 300 p.

Srivastava, S.K., Srivastava, P.K., Biswas, T.K., Behera, M.D., **Mukul, S.A.** (eds.). Forthcoming. ***Earth Observation for Monitoring Mangrove Ecosystems***. Springer Nature, Switzerland, 350 p.

Mukul, S.A., Rashid, A.Z.M.M. (eds.). 2017. ***Protected Areas: Policies, Management and Future Directions***. Nova Science Publishers, New York, 239 p (ISBN: 9781536106640).

Forwarded by: [Prof. William F. Laurance](#) (James Cook University, Australia), [Prof. Ruth DeFries](#) (Columbia University, USA), and [Prof. Marc Hockings](#) (University of Queensland, Australia)

Selected book chapters:

Mukul, S.A., Herbohn, J., Firn, J., Gregorio, N. 2023. Carbon and biodiversity outcomes under divergent management scenarios - Lessons from upland Philippines shifting cultivation landscapes. In: Cairns, M. (ed.), ***Farmer Innovations and Best Practices by Shifting Cultivators in Asia-Pacific***. CABI, UK, pp. 408-420.

Mukul, S.A. 2022. Consumption and marketing pattern of non-timber forest products in a rapidly changing world: Insights from north-eastern Bangladesh. In: Rashid, A.Z.M.M., Khan, N.A., Hossain, M. (eds.), ***Non-Wood Forest Products of Asia: Knowledge, Conservation and Livelihood***. Springer, Switzerland, pp. 205-220.

Mukul, S.A., Halim, M.A., Herbohn, J. 2021. Forest carbon stock and fluxes: distribution, biogeochemical cycles and measurement techniques. In: Leal Filho, W. et al. (eds.). ***Life on Land, Encyclopedia of the UN Sustainable Development Goals***. Springer, Switzerland, pp. 361-376.

Ota, L., **Mukul, S.A.**, Gregorio, N., Herbohn, J. 2021. Community-based management of tropical forests: lessons learned and implications for sustainable forest management. In: Blaser, J., Hardcastle, P. (eds.), ***Achieving Sustainable Management of Tropical Forests***. Burleigh Dodds, Cambridge, UK, doi: 10.19103/AS.2020.0074.24.

Mukul, S.A., Biswas, S.R., Rashid, A.Z.M.M. 2018. Biodiversity in Bangladesh. In: Pullaiah, T. (ed.). ***Global Biodiversity and Conservation, Volume 1: Selected countries in Asia***. Apple Academic Press/CRC Press, Canada, pp. 93-107.

Mukul, S.A. 2014. Biodiversity conservation and ecosystem functions of traditional agroforestry systems. Case study from three tribal communities in and around Lawachara National Park,

Bangladesh. In: Chowdhury, M.S.H. (ed.), **Forest Conservation in Protected Areas of Bangladesh: Policy and community development perspectives**. Springer, Berlin, Germany, pp. 171-179.

Selected peer-reviewed journal articles:

Hordijk, I., Bialic-Murphy, L., Lauber, T., Routh, D., Poorter, L., ... **Mukul, S.A.**, et al. 2024. Dominance and rarity in tree communities across the globe: Patterns, predictors and threats. **Global Ecology and Biogeography**, e13889.

Slik, J.F., Pinho, B.X., Griffith, D.M., Webb, E., ... **Mukul, S.A.**, et al. 2024. Wind dispersed tree species have greater maximum height. **Global Ecology and Biogeography**, e13878.

Zou, Y., Zohner, C.M., Averill, C., Ma, H., Merder, J., .. **Mukul, S.A.**, .. Crowther, T.W. 2024. Positive feedbacks and alternative stable states in forest leaf types. **Nature Communications**, 15: 4658.

Cooper, D.L.M., Lewis, S.L., Sullivan, M.J.P., .. **Mukul, S.A.**, et al. 2024. Consistent patterns of common species across tropical forest tree communities. **Nature**, 625: 728-734.

Sarkar, O.T., **Mukul, S.A.** 2024. Challenges and Institutional Barriers to Forest and Landscape Restoration in the Chittagong Hill Tracts of Bangladesh. **Land**, 13: 558.

Sarkar, P., Banerjee, S., Biswas, S., Saha, S., Pal, D., Naskar, M.K., Srivastava, S.K., Barman, D., Kar, G., **Mukul, S.A.** 2024. Contribution of Mangrove Ecosystem Services to Local Livelihoods in the Indian Sundarbans. **Sustainability**, 16: 6804.

Gulzar, R., Wani, S.A., Hassan, T., Reddy, C.S., Shrestha, B.B., **Mukul, S.A.**, Shabbir, A., Iqbal, I.M., Ranwala, S.M.W., Sujanalpal P, D., Rashid, I., Khuroo, A.A. 2024. Looking beyond the political boundaries: An integrated inventory of invasive alien flora of South Asia. **Biological Invasions**, 26: 57-78.

Bouchard, E., Searle, E.B., Drapeau, P.,... **Mukul, S.A.**, et al. 2023. Global patterns and environmental drivers of forest functional composition. **Global Ecology and Biogeography**, 33: 303-324.

Akter, T., Hoque, M.A.A., **Mukul, S.A.**, Pradhan, B. 2024. Coastal Flood Induced Salinity Intrusion Risk Assessment Using a Spatial Multi-criteria Approach in the South-Western Bangladesh. **Earth Systems and Environment**, DOI: 10.1007/s41748-024-00399-9.

Mo, L., Zohner, C.M., Maynard, D.S., van den Hoogen, J., Araza, A., Herold, M., ... **Mukul, S.A.**, et al. 2023. A comprehensive global assessment of the natural forest carbon potential. **Nature**, 624: 92-101.

Chowdhury, S., Fuller, R.A., Rokonuzzaman, M., Alam, S., Das, P., Siddika, A., Ahmed, S., Labi, M.M., Chowdhury, S.U., **Mukul, S.A.**, Böhm, M., Hanson, J.O. 2023 Insights from citizen science reveal priority areas for conserving biodiversity in Bangladesh. **One Earth**, 6: 1315-1325.

Hordijk, I., Maynard, D.S., Hart, S.P., Mo, L., Steege, H., ... **Mukul, S.A.**, et al. 2023. Evenness mediates the global relationship between forest productivity and richness. **Journal of Ecology**, 111: 1308-1326.

Khan, A., Karim, M.R., Mohammed, Kibria, M.G., Sinha, K., Sultana, F., **Mukul, S.A.**, Arfin-Khan, M.A.S. 2023. Anthropogenic disturbance modifies tree functional trait distribution in the only remnant swamp forest of Bangladesh. **Frontiers in Ecology and Evolution**, 11: 1062764.

Sultana, F., Karim, M.R., Arfin-Khan, M.A.S., **Mukul, S.A.** 2023. Rainfall modifies the disturbance effects on regulating ecosystem services in tropical forests of Bangladesh. *Forests*, 14: 272.

Ahammad, R., Hossain, M.K., Sobhan, I., Hasan, R., Biswas, S.R., **Mukul, S.A.** 2023. Social-ecological and institutional factors affecting forest and landscape restoration in the Chittagong Hill Tracts of Bangladesh. *Land Use Policy*, 124: 106478.

Karim, M.R., **Mukul, S.A.**, Zahira, R.B., Saimun, M.S.R., Arfin-Khan, M.A.S. 2023. The role of protected areas co-management in enhancing resilience and resistance of deciduous forest ecosystem to extreme climatic events in Bangladesh. *Journal of Environmental Management*, 326: 116800.

Liang, J., Gamarra, J.G.P., Picard, N., Zhou, M., Pijanowski, B.C., ... **Mukul, S.A.**, et al. 2022. Evidence of co-limitation in global forest diversity gradients. *Nature Ecology and Evolution*, 6: 1423-1437.

Chowdhury, S., Alam, S., Labi, M.M., Khan, N., Rokonzaman, M., Biswas, D., Tahea, T., **Mukul, S.A.**, Fuller, R.A. 2022. Protected areas in South Asia: Status and prospects. *Science of the Total Environment*, 811: 152316.

Seibold, S., Rammer, W., Hothorn, T., Seidl, R., .. **Mukul, S.A.**, et al. 2021. The contribution of insects to global forest deadwood decomposition. *Nature*, 597: 77–81.

Ota, L., Firn, J., Chazdon, R., Gregorio, N., **Mukul, S.A.**, Viani, R., Romero, C., Herbohn, J. 2021. Using leading and lagging indicators for forest restoration. *Journal of Applied Ecology*, 58: 1806-1812.

Bhattra, S., Pant, B., Laudari, H.K., Rai, R., **Mukul, S.A.** 2021. Strategic pathways to scale up forest and landscape restoration: Insights from Nepal's Tarai. *Sustainability*, 13: 5237.

Halder, N.K., Merchant, A., Misbahuzzaman, K., Wagner, S., **Mukul, S.A.** 2021. Why some trees are more vulnerable during catastrophic cyclone events in the Sundarbans mangrove forest of Bangladesh? *Forest Ecology and Management*, 488: 119085.

Ho, Y.S., **Mukul, S.A.** 2021. Publication performance and trends in mangrove forest: A bibliometric analysis. *Sustainability*, 13: 12409.

Mukul, S.A., Huq, S., Herbohn, J., Seddon, N., Laurance, W.F. 2020. Saving the Sundarbans from development. *Science*, 368: 1198.

Mukul, S.A., Khan, M.A.S.A., Uddin, M.B. 2020. Identifying threats from invasive alien species in Bangladesh. *Global Ecology and Conservation*, 23: e01196.

Mukul, S.A., Herbohn, J., Firn, J. 2020. Rapid recovery of tropical forest diversity and structure after shifting cultivation in the Philippines uplands. *Ecology and Evolution*, 10: 7189-7211.

Mukul, S.A., Byg, A. 2020. What determines indigenous *Chepang* farmers swidden land-use decisions in central hill districts of Nepal? *Sustainability*, 12: 5326.

Mukul, S.A., Alamgir, M., Sohel, M.S.I., Pert, P.L., Turton, S.M., Herbohn, J., et al. 2019. Combined effects of climate change and sea level rise project dramatic habitat loss of critically endangered Bengal tiger in the Bangladesh Sundarbans. *Science of the Total Environment*, 663: 830-840.

Mukul, S.A., Sohel, M.S.I., Herbohn, J., Inostroza, L., König, H. 2017. Integrating ecosystem services supply potential in protected area management: A Bangladesh case study. *Ecosystem Services*, 26: 355-364.

Mukul, S.A., Saha, N. 2017. Conservation benefits of tropical multifunctional land-uses in and around a forest protected area of Bangladesh. *Land*, 6: 44-55.

Mukul, S.A., Herbohn, J., Firn, J. 2016. Tropical secondary forests after shifting cultivation are important carbon sink in the upland Philippines. *Scientific Reports*, 6: 22483.

Mukul, S.A., Herbohn, J. 2016. The impacts of shifting cultivation on secondary forests dynamics in tropics: a synthesis of the key findings and spatio temporal distribution of research. *Environmental Science & Policy*, 55: 167-177.

Mukul, S.A., Uddin, M.B., Rashid, A.Z.M.M., Fox, J. 2010. Integrating livelihoods and conservation in protected areas: understanding role and stakeholders' views on the prospects of non-timber forest products, A Bangladesh case study. *International Journal of Sustainable Development & World Ecology*, 17: 180-188.

Research Grants

I have secured >US\$1 million in funding as Lead PI, PI, or co-PI, on projects ranging from ecosystem services assessment, forest conservation and restoration, mangrove forestry, and protected area management. Major research grants include:

2024: **PI**, ICIMOD-Himalayan University Consortium (Nepal) Thematic Research on Multispecies Migration in the Climate-Changed Himalayas (20,000 USD)

– *Project: Predicting the Consequences of Climate Change and Sea-Level Rise on Floral and Faunal Assemblages in the World's Largest Mangrove Forest, the Sundarbans;*

2024: **PI**, Asia Pacific Network for Global Change Research (Japan) Collaborative Regional Research Programme Grant (100,000 USD)

– *Project: Assessing the role of trees outside forests in climate change mitigation and achieving carbon neutrality in the Hindu-Kush Himalayan Region (Bangladesh/India/Nepal);*

2022: **PI**, National Geographic Society (USA) Exploration Grant (27,950 USD)

– *Project: Unlocking the potentials of Sundarbans mangrove forest as a nature-based climate solution;*

2020: **PI**, British Ecological Society (BES) Large Research Grant (19,740 GBP)

– *Project: Measuring carbon stocks and fluxes across a successional and salinity gradient in Sundarbans - the world's largest mangrove forest;*

2020: **Co-PI**, Asia Pacific Network for Global Change Research (Japan) Collaborative Regional Research Programme Grant (101,000 USD)

– *Project: Protecting ecosystems and livelihoods of the Sundarbans, a World Heritage Site: Assessing the impact of natural hazards on forest-based ecosystem services;*

2020: **Co-PI**, South Asian Network for Development and Environmental Economics (SANDEE) Research Grant (23,000 USD)

– *Project: Impact of co-management program on forest restoration and livelihood enhancement of forest-dependent communities in Bangladesh;*

2019: Lead Researcher, ACIAR FLR Project Activity 2.6 (~200,000 AUD)– *Project: Developing a geospatial model to monitor the impacts of Forest and Landscape Restoration;*

Teaching and Student Supervision

I have been teaching courses like Environmental Biology, Ecology, and Conservation; Environmental Issues in Bangladesh; Environment, Conflict and Security; Urban Development and Environmental Management. Currently, I advise 2 PhD students and 3 Masters students. I have graduated 2 PhD students and 5 Masters students and supervised an additional 12 undergrads.

Other Services

Associate Editor and Editorial Board Member (2016-): *Journal of Applied Ecology* (British Ecological Society, Impact Factor: 5.7); *Ecosystem Health and Sustainability* (AAAS, IF: 4.9); *Biodiversity and Conservation* (Springer, IF: 3.4); *Frontiers in Ecology and Evolution* (Frontiers, IF: 3.0); *Sustainability* (MDPI, IF: 3.9); and *Discover Conservation* (Springer OA);

Research Grant Reviewer (2020-): European Union's BiodivRestore Program, British Ecological Society (UK), Bangladesh Forest Department, and University of Hawaii Sea Grant Program (USA);

Advisor; Forests and Biodiversity (2019-2020): Parliamentary Standing Committee on Ministry of Environment, Forest and Climate Change (MoEFCC), Government of Bangladesh;

Advisor; Nature-based Climate Solutions (2019-): International Centre for Climate Change and Development (ICCCAD), Dhaka, Bangladesh;

Section Editor, Encyclopedia of the UN Sustainable Development Goals (2020): Life on Land, Springer;

Scientific Committee Member and Reviewer (2013, 2014): 'Annual World Bank Conference on Land and Poverty' held in Washington DC, USA;

Reviewer, IPCC Fifth Assessment Report (2013): Working Group II – Climate change impacts, adaptation and vulnerability.

Professional Memberships

British Ecological Society (BES) (2015-)

American Geophysical Union (AGU) (Global Environ. Change Chapter Executive Member) (2016-)

Association for Tropical Biology and Conservation (2008-) (Bangladesh Chapter President, 2009)

Commonwealth Forestry Association (CFA) (2014-) / Forestry Australia (2023-)

Referees

Prof. Dr John Herbohn, Forest Research Institute, University of the Sunshine Coast, Maroochydore DC, QLD 4556, AUSTRALIA, E-mail: jherbohn@usc.edu.au

Prof. Dr Jenniffer Firn, School of Biology and Environmental Science, Queensland University of Technology, Brisbane, QLD 4000, AUSTRALIA, E-mail: jennifer.firn@qut.edu.au

Prof. Dr Pallab Mozumder, Department of Economics, and Department of Earth and Environment, Florida International University, Miami, FL 33199, USA, E-mail: mozumder@fiu.edu