

Curriculum Vitae of Tarit Kumar Baul

Date of CV writing: 14 October 2024

1. Personal details, current position, and research interests

- Baul, Tarit Kumar
- **Project Researcher, School of Forest Sciences, University of Eastern Finland, Joensuu, Finland**
- ORCID ID: <https://orcid.org/0000-0002-0805-0657>
- Date and place of birth: 18 August 1979; Chittagong, Bangladesh
- Cell: +3582552295; Email id: tarit.baul@uef.fi; tarit.ifes@cu.ac.bd; taritkumar@gmail.com

My research focuses on the climate impacts of carbon sequestration and material substitution by forest biomass, with implications on the management of forests, agroforests, and tree outside forests (TOF). This includes LCA, ecosystem- and techno-carbon, and substitution impacts analyses. Research is also focused on forest-people-climate interaction and management of natural resources and biodiversity, with emphasis on conservation and utilization issues.

2. Professional experiences

- **10/06/2024– to date:** School of Forest Sciences, University of Eastern Finland (UEF), Joensuu, Finland, **Project Researcher**, <https://uefconnect.uef.fi/en/person/tarit.baul/>
- **30/10/2023– to date (on leave):** Institute of Forestry and Environmental Sciences, University of Chittagong (IFESCU), Chittagong, Bangladesh, **Professor**; Responsibility: Teaching, supervising students and research; profile: https://cu.ac.bd/public_profile/index.php?ein=4913
- **15/11/2018– 29/10/2023:** IFESCU, Chittagong, Bangladesh, **Associate Professor**
- **01/07/2018– 14/11/2018:** IFESCU, Chittagong, Bangladesh, **Assistant Professor**
- **01/12/2014–30/06/2018 (on study leave):** IFESCU, Chittagong, Bangladesh, **Assistant Professor**
- **01/12/2014–30/06/2018:** University of Eastern Finland, Joensuu, Finland, **Researcher**
- **07/07/2012–30/11/2014:** IFESCU, Chittagong, Bangladesh, **Assistant Professor**
- **02/07/2011–06/07/2012:** IFESCU, Chittagong, Bangladesh, **Lecturer**
- **01/12/2008–30/05/2009:** Danish Centre for Forest, Landscape and Planning, University of Copenhagen, Denmark, **Student researcher (Part time; Mineral soil and forest floor C and N analysis)**
- **31/12/2007–01/07/2011:** Barapukuria Coal Mine Co Ltd., Ministry of Power, Energy, and Natural Resources, Bangladesh **Assistant Manager (Full time; Material flow and inventory control)**

3. Education and degrees awarded

- 19/06/2018: **DSc in Forest Science** at **University of Eastern Finland (UEF)**, Finland.
- 01/12/2010: **MSc in Agroforestry with Distinction** at **Bangor University**, UK.
- 15/11/2010: **MSc in Agricultural Development** at **University of Copenhagen**, Denmark
- 17/10/2006: **MSc in Forestry** at **University of Chittagong**, Bangladesh.
- 09/11/2004: **BSc (Honours) in Forestry** at **University of Chittagong**, Bangladesh.

4. Relevant training and skills

- LCA, SIMA modelling, Forest ecosystem carbon, Sustainability science
- **14/06/2023-15/06/2023:** Training on **Accreditation Documentation and OBE-Based Curriculum Template Preparation'** organized by IQAC, University of Chittagong, Bangladesh.
- **08/07/2018-09/07/2018:** Professional development training on **“teaching, learning and research methodology”** at University of Chittagong, Chittagong, Bangladesh.
- **March 2017: Research project management**, at the UEF, Finland
- **31/10/2016–04/11/2016:** NOVA PhD course, **An Introduction to Ecosystem Service Theory and Practices** at the University of Copenhagen, Denmark
- **June 2016: Scientific writing skills**, at the UEF, Finland
- **19/10/2015–23/10/2015:** NOVA PhD course, **Design, implementation and analysis of simulation studies** at the UEF, Finland
- **24/03/2013–25/03/2013:** Training on **“Land cover classification in the context of REDD+ in Bangladesh”** at Bangladesh Forest Department (BFD), organized by FAO and BFD
- **03/12/2012–04/12/2012:** International workshop on **“Simapro based Life cycle assessment (LCA) and Material flow analysis (MFA)”** at University of Chittagong, Chittagong, Bangladesh
- **24/06/2012–25/06/2012:** Training on **“Agroforestry Technology”** at Bangladesh Agriculture Research Council (BARC), Dhaka, Bangladesh

5. Scientific articles (Peer reviewed/Referred)

- Total number of publications: 38; h-index: 15; i10 index: 22, citation: 694
- Scholar id: <https://scholar.google.com/citations?user=l0GjIewAAAAJ&hl=en>

- i. **Baul TK**, Atri AC, Alam A, Jashimuddin M. **2024** Understanding substitution impacts of harvested wood and processing residues to mitigate climate change: a case of Chattogram, Bangladesh. *Cleaner and Responsible Consumption (Q1 Journal, IF: 3.7)*
- ii. Loke VPW, **Baul TK**, Nath TK. **2024**. A sustainability analysis of community-conserved areas in Sabah, Malaysia using Ostrom's design principles. *International Forestry Review*, 26(3), 328-344 Commonwealth Forestry Association, <https://doi.org/10.1505/146554824839071643> (*IF: 1.8*)
- iii. Sarker A, **Baul TK**, Nath TK, Karmakar S, Paul A. **2024**. Household solid waste management in a recently established municipality of Bangladesh: Prevailing practices, residents' perceptions, attitude and awareness. *World Development Sustainability* 4, 100120. <https://doi.org/10.1016/j.wds.2023.100120>
- iv. Jashimuddin M, Hasan MH, **Baul TK**.Nath TK. **2024**. Principles of people-centric forest restoration projects in south-eastern Bangladesh: implications for sustainability. *Restoration Ecology*, <https://doi.org/10.1111/rec.14087> (*Q1 Journal, IF: 3.85*)
- v. **Baul TK**, Chowdhury AI, Uddin MJ, Hasan MK, Kilpeläinen A, Nandi R, Karmakar S, Akhter J. **2023**. Effects of fragmentation and shifting cultivation on soil carbon and nutrients: A case study in Sitapahar forest, Bangladesh. *Rhizosphere* 27, 100756 (*Q1 Journal, IF: 3.4*)
- vi. **Baul TK**, Chowdhury AI, Uddin MJ, Hasan MK, Nandi R, Nath TK, Kilpeläinen A. **2023**. Evaluating gap characteristics and their effects on regeneration in Sitapahar forest reserve, Bangladesh. *European Journal of Forest Research*. 142 (1), 37-47(*Q1 Journal, IF: 3.14*)
- vii. Chowdhury AI, Uddin MJ, **Baul TK**, Akhter J, Nandi R, Karmakar S, Nath TK. **2022**. Quantifying the Potential Contribution of Urban Trees to Particulate Matters Removal: A study in Chattogram city, Bangladesh. *Journal of Cleaner Production*. 380, <https://doi.org/10.1016/j.jclepro.2022.135015> (*Q1 Journal, IF: 11*)
- viii. **Baul TK**, Khan MA, Sarker A, Atri AC, Jashimuddin M, Alam A. **2022**. Perceptions and attitudes of tertiary level students towards wood and fossil fuel-based furniture and energy fuels in Bangladesh. *Trees, Forests & People*. <https://doi.org/10.1016/j.tfp.2022.100351> (*Q1 Journal, IF: 2.7*)
- ix. Datta S, Karmakar S, Mezbahuddin S,.....**Baul TK**, **2022**. The limits of watershed delineation: implications of different DEMs, DEM resolutions, and area threshold values. *Hydrology Research (Q2 Journal, IF: 2.41)*
- x. **Baul TK**, Das M, Kar S, Jashimuddin M. **2022**. Household-level cooking stove emissions, perceptions and influencing factors: Lessons learned from Rangunia Upazila, Chittagong, Bangladesh. *Current Research in Environmental Sustainability*. (*Q1 Journal, IF: 4.4*)
- xi. **Baul TK**, Peuly TA, Nandi R, Kar S, Karmakar, S. **2022**. Role of Homestead Forests in Adaptation to Climate Change: A Study on Households' Perceptions and Relevant Factors in Bandarban Hill District, Bangladesh. *Environmental Management*. 1-13 (*Q1 Journal, IF: 3.644*)
- xii. **Baul TK**, Das M, Kar S, Acharya R. **2022**. Renewable and non-renewable energy consumption pattern among households around a protected area in Southeastern Bangladesh. *SN Social Sciences* 2 (1), 1-24
- xiii. **Baul TK**, Chowdhury AI, Uddin MJ, Hasan MK, Schmidt LR, Nandi R. **2022**. Diversity and Phytosociology of Natural Regeneration in a Sub-tropical Forest of Chittagong Hill Tracts, Bangladesh: Implications for Conservation. *Journal of Sustainable Forestry*, 1-14 (*Q2 Journal, IF: 1.425*)
- xiv. **Baul TK**, Chakraborty A, Peuly TA, Karmakar S, Nandi R, Kilpellainen A. **2021**. Effects of Varying Forest Management on Soil Carbon and Nutrients in Hill and Coastal Homegardens in Bangladesh. *Journal of Soil Science and Plant Nutrition*. 10.1007/s42729-021-00680-0 (*Q1 Journal, IF: 3.6*)
- xv. **Baul TK**, Chakraborty A, Nandi R, Nath TK, Mohiuddin M. **2021**. Phytosociological Attributes and Ecosystem Services of Maheshkhali Island's Homegardens of South-Western Bangladesh. *Trees, Forests & People*. 5: 100092 (*Q1 Journal, IF: 2.7*)
- xvi. **Baul TK**, Peuly TA, Nandi R, Kar S, Mohiuddin M. **2021**. Composition of homestead forests and their contribution to local livelihoods and environment: A study focused on Bandarban hill district, Bangladesh. *Trees, Forests & People*. 5: 100117 (*Q1 Journal, IF: 2.7*)
- xvii. **Baul TK**. Peuly TA, Nandi R, Schmidt LH, Karmakar S. **2021**. Carbon stocks of homestead forests have a mitigation potential to climate change in Bangladesh. *Scientific Reports*. 1 (1), 1-11 (*Q1 Journal, IF: 4.997*)
- xviii. **Baul TK**, Chakraborty A, Nandi R, Mohiuddin M, Kilpellainen A, Sultana, T. **2021**. Effects of tree species diversity and stand structure on carbon stocks of homestead forests in Maheshkhali Island,

- Southern Bangladesh. Carbon Balance and Management. 16:11. <https://doi.org/10.1186/s13021-021-00175-6> (*Q1 Journal, IF: 4.356*)
- xix. **Baul TK**, Chowdhury AI, Uddin MJ, Hasan MK, Kilpeläinen A, Nandi R. **2021**. Forest carbon stocks under three canopy densities in Sitapahar natural forest reserve in Chittagong Hill Tracts of Bangladesh. *Forest Ecology and Management*. <https://doi.org/10.1016/j.foreco.2021.119217> (*Q1 Journal, IF: 4.38*)
- xx. **Baul TK**, et al. **2021**. Restaurants' waste in Chittagong city, Bangladesh: Current management, awareness on environmental hazard and perception towards potential uses. *Journal of Cleaner Production* 292. 126073 (*Q1 Journal, IF: 11*)
- xxi. **Baul TK**, Alam A, Strandman H, Seppälä J, Peltola H, Kilpeläinen A. **2020**. Radiative forcing of forest biomass production and use under different thinning regimes and initial age structures of a Norway spruce forest landscape. *Canadian Journal of Forest Research*, 00: 1–10 (0000) [dx.doi.org/10.1139/cjfr-2019-0286](https://doi.org/10.1139/cjfr-2019-0286) (*Q1 Journal, IF: 2.33*)
- xxii. **Baul TK**. **2018**. Climate impacts of carbon sequestration of forests and material substitution by energy biomass and harvested wood products under boreal conditions. *Dissertationes Forestales* 255. 38 p. <https://doi.org/10.14214/df.255>
- xxiii. **Baul TK**, et al. **2018**. A comparative study on household level energy consumption and related emissions from renewable (biomass) and non-renewable energy sources in Bangladesh. *Energy Policy* 114: 598–608 (*Q1 Journal, IF: 7.57*)
- xxiv. **Baul TK**, Alam A, Ikonen A, Strandman H, Asikainen A, Peltola H, Kilpeläinen A. **2017**. Climate Change Mitigation Potential in Boreal Forests: Impacts of Management, Harvest Intensity and Use of Forest Biomass to Substitute Fossil Resources. *Forests*, 8: 455. doi:10.3390/f8110455 (*Q1 Journal, IF: 3.28*)
- xxv. **Baul TK**, Alam A, Strandman H, Kilpeläinen A. **2017**. Net climate impacts and economic profitability of forest biomass production and utilization in fossil fuel and fossil-based material substitution under alternative forest management. *Biomass and Bioenergy*, 98: 291–305 (*Q1 Journal, IF: 5.774*)
- xxvi. **Baul TK**, Alam MJ, Nath TK. **2015**. *Mangifera sylvatica* Roxb. in the Forests of South-Eastern Bangladesh: A Potential Underutilised Tree for Small-Scale Forestry. *Small-scale Forestry*, 15(2): 149–158 (*Q2 Journal, IF: 1.33*)
- xxvii. **Baul TK**, Rahman MM, Moniruzzaman Md, Nandi R. **2015**. Status, utilization, and conservation of agrobiodiversity in farms: a case study in the northwestern region of Bangladesh, *International Journal of Biodiversity Science, Ecosystem Services & Management*, 11(4): 318–329
- xxviii. **Baul TK**, McDonald M. **2015**. Integration of indigenous knowledge in addressing climate change. *Indian Journal of Traditional Knowledge*, 1(1): 20–27 (*Q2 Journal, IF: 1.09*)
- xxix. **Baul TK**, McDonald M. **2014**. Agro-biodiversity management: Using indigenous knowledge to cope with climate change in the Middle-Hills of Nepal. *Agricultural Research*, 3(1): 41–52 (*Q2 Journal*)
- xxx. **Baul TK**, Ullah KMA, Tiwari KR, McDonald M. **2013**. People's local knowledge of climate change in the Middle-Hills of Nepal. *Indian Journal of Traditional Knowledge*, 12(4): 585–595 (*Q2 Journal, IF: 1.09*)
- xxxi. **Baul TK**, Tiwari KR, Ullah KMA, McDonald M. **2013**. Agrobiodiversity on farm: A case from Middle-Hills of Nepal. *Small Scale Forestry*, 12: 611–629 (*Q2 Journal, IF: 1.33*)
- xxxii. Nath TK, **Baul TK**, Rahman MM, Islam MT, Rashid MH. **2013**. Traditional biomass fuel consumption by rural households in degraded sal (*Shorea robusta*) forest areas of Bangladesh. *International Journal of Emerging Technology and Advanced Engineering*, 3(3): 537–544
- xxxiii. **Baul TK**, Charlery LC,...et al. **2013**. Vegetation characteristics and volume estimation of *shorea* and *schima-castanopsis* of Kaski district of Nepal. *Indian Forester*, 139(5): 459–464
- xxxiv. **Baul TK**, Mohiuddin M. **2012**. Medicinal tree species in the plantation of Chittagong University campus, Bangladesh. *Journal of Tropical Medicinal Plants*, 13(1): 93–97
- xxxv. **Baul TK**, et al. **2011**. Vegetative propagation of *Litsea monopetala*, a wild tropical medicinal plant: Effects of indole-3-butyric acid (IBA) on stem cuttings. *Journal of Forestry Research*, 22(3): 409–416 (*Q2 Journal, IF: 2.36*)
- xxxvi. **Baul TK**, Mohiuddin M. **2011**. Certain medicinal tree species in the forests of Bangladesh. *Journal of Tropical Medicinal Plants*, 12(2): 225–228
- xxxvii. **Baul TK**, et al. **2010**. Vegetative propagation of *Holarrhena pubescens*, a wild tropical medicinal plant: effect of indole-3-butyric acid (IBA) on stem cuttings. *Forestry Studies in China*, 12(4): 228–235

- xxxviii. **Baul TK, Mezbahuddin M, Mohiuddin M. 2009.** Vegetative propagation and initial growth performance of *Stereospermum suaveolens* (DC), a wild tropical tree species of medicinal value. *New Forests*, Springer Netherlands, 37(3): 275–283 (*Q2 Journal, IF: 2.697*)

6. Conferences and seminars

- **23/06/2024-29/06/2024: Baul TK, et al. 2024.** Carbon stocks of homestead forests have a mitigation potential to climate change: A case from Chittagong Hill Tracts, Bangladesh. XXVI World Congress of the IUFRO, Stockholm, Sweden (**Poster by short oral**)
- **02/09/2022-04/09/2022: Baul TK, et al. 2022.** Co-benefits of carbon stocks and tree species diversity of coastal homestead forests in southern Bangladesh. International Conference on Environmental Protection for Sustainable Development (ICEPSD 2022), Dhaka, Bangladesh (**Oral**)
- **21/07/2021-23/07/2021:** Attended 2021 virtual meeting of the Association for Tropical Biology and Conservation, “Lessons, advances, and opportunities in the face of global change” (**participant**)
- **16/10/2019-17/10/2019: Baul TK 2019.** Homestead agroforestry and its potential for carbon sequestration in Bangladesh. The 3rd International Conference in Agroforestry. Indonesia (**Oral**)
- **20/05/2019-22/05/2019: Baul TK 2019.** Domestication potential of wild tropical promising tree species of medicinal and fruit values. 4th World Congress on Agroforestry 2019, Montpellier, France (**Poster**)
- **07/10/2015-09/10 /2015: Baul TK, Datta D, Alam A. 2015.** Rural energy consumption pattern and carbon forestry. Global Forestry Trends, UEF, School of Forest Sciences, Joensuu, Finland (**Oral**)
- **10/02/2014–14/02/2014: Baul TK, Rahman MM, Moniruzzaman M, Nandi R. 2014.** Exploring agrobiodiversity on the farm land of Sirajganj District of Bangladesh: a case from Ullapara upazila. World Congress on Agroforestry 2014, Delhi, India (**Poster**)
- **07/02/2013–09/02/2013: Nath TK, Baul TK, Rahman MM, Islam MT, Rashid MH. 2013.** Traditional biomass fuel consumption by rural households in degraded sal (*Shorea robusta*) forest areas of Bangladesh. International Conference on Energy Resources and Technologies for Sustainable Development (ICERTSD), Bengal Engineering and Science University, West Bengal, India (**Oral**)

7. Research funding and grants

- **01/01/2021– 30/09/2021: Principal investigator**, “Gap dynamics in Sitapahar forest reserve, Bangladesh” funded by Research cell of the University of Chittagong, Bangladesh
- **01/01/2020–30/09/2020: Principal investigator** for research project titled “Mitigation and adaptation to climate change through homestead forests: A case from three different vulnerable sites of Bangladesh” funded by Research cell of the University of Chittagong, Bangladesh,
- **01/01/2019–30/09/2019: Principal investigator** for research project titled “Carbon sequestration potential of tropical forests in Bangladesh: A case study in Sitapahar reserve forest” funded by the University of Chittagong, Bangladesh
- **01/11/2016–30/06/2017: Principal investigator** for research project titled “Climate impacts of carbon sequestration and substitutional of forest biomass for fossil counterparts in boreal forests in Finland” funded by the Cultural Foundation, Finland
- **01/05/2016–31/10/2016: Principal investigator** for research project titled “Climate impacts of carbon sequestration and substitutional of forest biomass for fossil counterparts in boreal forests in Finland” funded by the Finnish Society of Forest Science, Finland
- **01/12/2014–30/11/2015: Principal investigator** for research project titled “Climate impacts of carbon sequestration and substitutional of forest biomass for fossil counterparts in boreal forests in Finland” funded by the FORTUM foundation, Finland

8. Research supervision and mentoring

- 02/07/2011–to date: **Supervised** (role: main supervisor) 15 MSc and 16 BSc Theses at IFESCU
- **Co-ordination and supervision of field work** in various forest areas for BSc students and course “Forest Management Plan” at IFESCU, Bangladesh
- **Group leader:** Research group - Forest carbon dynamics and management at IFESCU
- **Mentoring:** I mentor my students by providing hands-on training on research methodology, sampling, field data collection and analyses, scientific writing assistant SWAN, and presentation skills. Training on project proposal writing and providing recommendation letters and seminars on higher study and scholarship abroad.

9. International collaboration

- I collaborate with **University of Eastern Finland, Finland, University of Copenhagen, Denmark, University of Wisconsin-Stevens Point, USA, and Nottingham University, Malaysia.** These have increased my vertical understanding of carbon dynamics and biodiversity conservation of tropical forest

while developing my leadership and coordination skills and working capabilities in international atmosphere.

- 2021- to date: I work as a **guest lecturer on tropical forest restoration** at Copenhagen University.

10. Prize and Awards

- **2022: Top ten research publishers** of University of Chittagong, Bangladesh (highest number of scopus indexed publications)
- **2021: Top impact factor publisher** in the Faculty of Science at University of Chittagong, Bangladesh
- **2021: Top ten research publishers** of University of Chittagong, Bangladesh (highest number of scopus indexed publications)
- **08/04/2016:** Cultural foundation grant for PhD study at UEF, Finland
- **05/04/2016:** Finnish Society of Forest Science grant for PhD study at UEF, Finland
- **16/06/2014:** FORTUM foundation grant for PhD study at UEF, Finland
- **08/12/2014:** Selected for IPRS and Postgraduates Award (APA) for PhD study in Australia
- **24/09/2008:** European Erasmus Mundus Masters Scholarship on SUTROFOR for 2008-2010
- **2005–2006:** Merit scholarship at University of Chittagong, Bangladesh for MSc study

11. Merits in teaching

- **13 years of research and teaching** experiences at IFESCU, Bangladesh in the field of forestry and environmental science
- Involved in **upgradation of course curriculum** at BSc and MSc level of Forestry and Environmental Science studies at IFESCU, Chittagong, Bangladesh
- Involved in **formulating new courses** - “Land-use Management and Policy Analysis”, “Mitigation and Adaptation to Climate Change”, and “Wood Processing and Utilization” at MSc and BSc level at IFESCU, Bangladesh
- **Taught courses at BSc level:** Mitigation and Adaptation to Climate Change, Wood Processing and Utilization, Wood Composite, Pulp and Pulp Products, Wood Structure and Properties, Environmental Management, Non-wood Forest Products, Land-use Planning and Management at IFESCU.
- **Taught courses at MSc level:** Land-use Management and Policy Analysis, Agroforestry and Sustainable development at IFESCU, Bangladesh

12. Other key academic merits

- **Reviewer** - Frontiers in Sustainable Food Systems, Forests, Journal of Cleaner Production, Journal of Forestry Research, Small Scale Forestry, Agroforestry Systems, Geology, Ecology, and Landscapes.
- **Membership** – Finnish Society of Forest Science, British Ecological Society, Association for Tropical Biology and Conservation, FARM-WOODLAND-FORUM, UK, EMA (Erasmus Mundus Students and Alumni Association), Institute of Foresters Bangladesh
- **Evaluator** - Funding applications for Research grants at the University of Chittagong, Bangladesh

13. Participation in contracts and technology transfer

- 01/05/2023 – to date: Supervisor for Chittagong University Research and Higher Study Society (CURHS) Summer Research Internship 2023, Bangladesh.**
- 01/05/2023 and onward: Consultant,** WASO Engineers & Consultants (BD) Ltd., Dhaka, Bangladesh for technology transfer in timber works
- 01/04/2023-30/10/2024:** Co-Principal Investigator at **Compass Program, US Forest International programs, Dhaka, Bangladesh** for National Botanical Garden (NBG) tree census data analysis and reporting
- 01/04/2023 and onward:** Renewable energy expert at **Parlancecs NGO, Dhaka, Bangladesh**
- Appear on national **printing and electronic media** on the issues related to environmental challenges

14. Travel abroad: Cambodia, Denmark, England, Estonia, France, Germany, Hungary, Indonesia, India, Italy, Latvia, Lithuania, Malta, Nepal, Poland, Russia, Sweden, Switzerland, Vatican, Wales

15. Referees

- Dr. Antti Kilpelainen, Senior Researcher in Silvicultural Sciences, University of Eastern Finland, Joensuu, North Karelia, Finland
Email: antti.kilpelainen@uef.fi
- Dr. Heli Peltola, Professor in Silvicultural Sciences, University of Eastern Finland, Joensuu, Finland
Email: heli.peltola@uef.fi
- Dr. Morag McDonald, Professor, School of Natural Sciences, Associate Pro Vice-Chancellor, Bangor University, UK.
Email: m.mcdonald@bangor.ac.uk

 **Tarit Kumar Baul**