

Joy Deep Chakrabarty

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CAREER SUMMARY

I am an expert in environmental economics, specializing in non-market valuation, environmental policy analysis, behavioral modeling, and cost-benefit analysis. My interdisciplinary expertise merges economic principles with environmental science to tackle complex environmental challenges and externalities. I have a proven track record of securing competitive external funding from both state and federal agencies and have collaborated with diverse global stakeholders and UN agencies in both developing and developed countries to collect data and prepare peer-reviewed journals and technical reports. I am eager to contribute to through innovative research and effective teaching, leveraging my interdisciplinary background, academic excellence, and leadership skills.

EDUCATION

University of Delaware

May 2021 - May 2024

Ph.D. in Environmental Economics

CGPA: 3.86

Major Courses: Cost-Benefit analysis, Advance Microeconomics, Development Economics, Econometrics Method Models, Economics of natural resources, Climate Change Economics.

University of Delaware

Aug 2019- May 2021

Masters. in Marine Policy

CGPA: 3.91

Major Courses: Choice Modeling, Decision Tools for Policy Analysis, Environmental Economics, Renewable Energy and Climate: Law, Regulation and Environment.

University of Dhaka

Sept 2017- Aug 2019

Master of Economics (Environmental Economics)

CGPA: 3.79

Major Courses: Microeconomics, Macro Economics, Probability Theory, Environmental Economics, Applied Statistics, Research Methods, Resource Economics, Welfare Economics and Public Policy Analysis, Energy economics.

Bangladesh University of Engineering and Technology (BUET)

Mar 2011- Mar 2016

Bachelor of Urban and Regional Planning

Major Courses: Urban Planning Principle, Landscape Planning, Transportation policy and Planning, Operations research and system analysis, GIS and Remote sensing, Environmental Engineering, Surveying and cartography.

WORK EXPERIENCE

Purdue University, West Lafayette IN

May 2024- Present

Post-Doctoral Fellow, Department of Agricultural Economics

- Led the design and administration of comprehensive household surveys for the Indiana Department of Natural Resources (DNR) for evaluating wildlife interactions and public outlook.
- Applied defensive expenditure models to quantify the economic value of key wildlife species, contributing to DNR's informed decision-making for resource allocation.
- Developed a dynamic bioeconomic model that transformed wildlife management strategies by

integrating sustainable practices, enabling data-driven adjustments to hunting limits and permit fees based on projected wildlife population changes and market demand.

- Collaborated with multidisciplinary teams to enhance the understanding of the economic impact of wildlife conservation efforts, directly supporting policy formulation and strategic planning.

National Oceanic & Atmospheric Administration (NOAA), Washington DC Feb 2023- Jan 2024
Sea Grant Knauss Fellow, Satellite Oceanography and Climatology Division (SOCD)

- Optimized day-to-day operations for the GEO Blue Planet Initiative, streamlining processes to improve efficiency and effectiveness in achieving global environmental goals which contributed to winning the GEO Global Impact Award.
- Contributed to the development of an operational plan that enhanced steering committee engagement, driving increased global impact and stakeholder involvement.
- Represented the GEO Blue Planet Initiative at high-profile international conferences, including NAP Expo in Chile, GEO Symposium 2023, and the Open Data and Open Knowledge Workshop in Geneva, promoting cross-collaborative partnerships and knowledge sharing.
- Led the coordination of planetary sessions and the Symposium forum at the 6th GEO Blue Planet Symposium in Seoul, Republic of Korea, and served as Co-Chair and speaker at the 2023 UN Water side event, showcasing expertise in Earth observation for water action.
- Led the Climate Change Working Group, taking a proactive role in establishing and leading the Flooding and Inundation Working Group, driving innovative approaches to climate resilience and adaptation strategies.
- Spearheaded the analysis of National Adaptation Plans (NAPs) to assess coastal component coverage, contributing to a guidance document for Coastal NAPs for the UNFCCC and
- Co-designed and developed monitoring tools for SDG 14.1.1 and 14.1.2 indicator with UNEP and co-authored 2023 SDG progress report for 14.1.1 and 14.1.2.
- Collaborated with international agencies, including UNEP, NOAA, and various government bodies, to drive stakeholder engagement and influence global environmental policies.
- Authored white papers, publications, and articles for NOAA STAR and Sea Grant Blogs, contributing to knowledge dissemination and policy advocacy.
- Served as a member of the natural resource writing team for the 3rd National Plan for Civil Earth Observations in 2023, influencing national planning and resource management strategies.

University of Delaware, Newark DE

Aug 2019- May 2024

Research Assistant, School of Marine Science and Policy

- Quantified value of water quality improvement on the Brandywine River, assessing policy impacts and conducting cost-benefit analyses to support NSF and State of Delaware-funded Project WiCCED, contributing to evidence-based environmental policy recommendations.

- Evaluated the economic impact of beach recreation on East Coast Ocean beaches from Massachusetts to South Carolina and modelled how beach recreationists might behave in case of different beach closure using travel cost method.
- Collaborated in designing questionnaire for Delaware Department of Natural Resources and Environmental Control (DENREC).
- Analyzed off shore wind turbine
- Designed and administered statewide surveys for non-market valuation, using Qualtrics, including recruitment of online and address based random samples and follow-up non-respondent.
- Specialized in policy impact assessments, cost-benefit analysis, and behavioral modeling of stakeholders, providing actionable insights into the effects of environmental policies and projects.
- Collaborated with interdisciplinary think tank teams like Industrial Economics, Incorporated (IEc) to translate research findings into practical applications for regional policy and development, fostering sustainable environmental and economic growth.

Institute of Water and Flood Management (IWFM), Dhaka BD

Mar 2018- Aug 2019

Technical Officer, REACH-Improving Water Security for Poor

- Led UNICEF resource deployment for smart hand pump installations, trained 12 field staff, managed and supervised data integrity for Oxford University, analyzed and update Bangladesh Government on progress toward SDG 6 (Clean Water and Sanitation).
- Partnered with NGOs, academic institutions, and government bodies to assess SDG 6 progress, providing data-driven insights to guide water policy decisions.
- Managed smart hand pump data for Oxford University using Ona and SQL databases and coordinated field operations, including data logger installation and replacement, ensuring seamless logistics and precise data collection from field.
- Provided comprehensive data support to Department of Public Health (DPHE) which contributed to effectively bridging the gap between academic research and government policy initiatives.
- Facilitated collaboration and workshops between academic institutions and government bodies, strengthening the impact of research and contributing to evidence-based policymaking in the water sector.

World Bank Group, Dhaka BD

Apr 2017- Feb 2018

Research Associate (STT), Efficient Multi-modal Logistic Study

- Led the data collection process for a research project aimed at improving the operational efficiency of Bangladesh's freight transport system.
- Organized workshops with Bangladesh Railway officials to gain insights into their data storage and record-keeping procedures.
- Developed a robust data collection methodology based on workshop report, including selection key

stations which helped to reduce data collection cost 3 times then initial estimates.

- Coordinated logistical aspects of field visits, managing travel arrangements for the data collection team to various 13 railway stations and ensuring efficient fieldwork execution.
- Conducted field observations, Key Informant Interviews (KII) with station master's and collected essential data on railway freight operations and management practices.
- Oversaw data collection and performed in-depth analysis of raw data and presented data in accessible formats to stakeholders.
- Contributed to the World Bank report "Moving Forward: Connectivity and Logistics to Sustain Bangladesh's Success," with formal recognition in the acknowledgments for key contributions to data collection and analysis.

International Finance Corporation (IFC), Dhaka BD

Dec 2016- Feb 2017

Research Associate (STT), Participatory Workshop to Develop Recommendation for Institutional Reform and Strengthening of Water Resource Management in Bangladesh

- Conducted an in-depth review of government policies, identifying key stakeholders and governance gaps in Bangladesh's water resource management sector for the WRG2030 group.
- Led the organization of a collaborative stakeholder workshop, resulting in the development and governmental endorsement of an Integrated Water Resources Management (IWRM) strategy with in Bangladesh Water Act 2013.
- Facilitated multi-stakeholder dialogue to drive consensus on institutional reform, directly influencing policy recommendations for sustainable water management practices.

SKILLS

Technical/Software Skills: MS package, SPSS, Ona, Tableau, Qualtrics, PC*Miler, SPSS, Nlogit, JMPpro, Stata, Power BI, ArcGIS/QGIS, Auto CAD, Python, R, C/C++

Modeling & Analysis: Policy Evaluation, Natural/Environmental resource valuation, Choice/Demand modelling, Behavior modelling, Cost benefit analysis, Random unitality Model, Socio economic survey design and administration.

Global Experience: Experience working in diverse countries, including USA, Bangladesh, India, Ghana, Republic of Korea, France, Germany

Language: English, Bangla, Hindi, Spanish (Basic)

RECENT CONFERENCES & WORKSHOPS

- **Grant Writing Seminar, Indiana, USA** 2024
Organized by Purdue University for Faculty Members (limited Post doc seat reserved)
- **Future Faculty Boot Camp, Indiana, USA** 2024

Academic Job Hunting: Recently hired Faculty and Post Doc Panel (Panel Speaker)

- **18th Annual Ecological Sciences and Engineering Symposium 2024, Indiana, USA** 2024

The Future of WATERS (Judge)

- **2024 Purdue Assistant professor Symposium, Indiana, USA** 2024

Life in academia, promotion and Tenure (part 01), Work and well being (Part 02)

- **NOAA CoastWatch Seminar Series. Virtual** 2023
Measuring the Value of Water Quality Improvements for Recreation Use on an Urban River in the USA:
A Travel Cost Contingent Behavior Approach (Spekaer)

- **28th Annual Conference of the European Association of Environmental and Resource Economists. Limassol, Cyprus** 2023
Chakrabartty, J.D., Persons, G. (2023). Measuring the Value of Water Quality Improvements for Recreation Use on an Urban River in the USA: A Travel Cost Contingent Behavior Approach (presenter/author/Session Chair)

- **GEO Symposium 2023. Geneva, Switzerland** 2023
Flash Talks: Enablers for scaling the impact of the GEO Work Programme (Speaker/Panelist)

- **Open Data Open Knowledge Workshop. Geneva, Switzerland** 2023
Open In-situ Data (Speaker/Panelist)

- **NAPEXPO 2023. Santiago, Chile** 2023
Earth observation in Coastal Adaptation Planning (Speaker/Panelist)

- **Third International Operational Satellite Oceanography Symposium. Busan, Korea** 2023
Smail, E., Hasson, A., Chakrabartty J.D. (2023) Curation of ocean satellite data sets Lessons from Users and Stakeholders (poster)

- **Bangladesh Planning Research Conference (BPRC), Dhaka, Bangladesh** 2016
Chakrabartty, J. D., Monir, M. A., Arefin, M. F., & Islam, M. (2016). ICT for Rural Development: A Mechanism to Strengthen Rural Economy. (Presenter/author)
Chakrabartty, J.D., Safayet, M., & Arefin, M. F. (2016). *Regional Disparity Analysis: A Case Study of Pabna, Rajshahi and Sirajganj Districts*. (Presenter/author)

- **International Conference on Social Work and Sustainable Social Development. Sylhet, Bangladesh** 2017
Chakrabartty, J. D., Safayet, M., & Arefin, M. F. (2017). A Study on Parking Management of BUET Campus. (Presenter/author)
Chakrabartty, J. D., Safayet, M., & Arefin, M. F. (2017). A Study on Regional Outflow from the Capital City Dhaka through Bus, Rail and Water Transport. (Presenter/author)

MEDIA FEATURES

- Featured on the GEO Blue Planet website as the inaugural speaker of the webinar series, presenting findings on coastal National Adaptation Plan (NAP) guidelines. ([link](#)) Jan 2024

- Highlighted in GEO Blue Planet website for contributions in GEO Global Impact award ([link](#)) Aug 2023
- Featured in Delaware Sea Grant website for contribution in coastal resilience initiatives for least developed countries. ([link](#)) June 2023
- Showcased on the University of Delaware newsletter for receiving highly competitive John A. Knauss Marine Fellowship 2023. ([link](#)) Dec 2022
- Recognized by the National Sea Grant website as Knauss finalist. ([link](#)) July 2022

NOTABLE PUBLICATIONS

- Chakrabartty, J.D., Parsons, G. (2024). Measuring the Value of Water Quality Improvements for Recreation Use on an Urban River in the USA: A Travel Cost Contingent Behavior Approach. *Agricultural and Resource Economics Review*(accepted)
- Chakrabartty, J.D., Parsons, G. (2024). A Profile of Beach Use on the East Coast of the United States with Per-trip Values and Consumer Surplus Estimates for Day, Short Overnight, and Long Overnight Trips. (Submitted: Land Economics)
- Chakrabartty, J.D., Parsons, G. (2024). A review of the literature of contingent behavior analysis in the context using travel cost models for non-market valuation. (work in progress)
- Chakrabartty, J.D., Islam, AKM. (2021). Economics of Potable Water from Alternative Sources in Salinity-prone Areas: A Case Study of Polder 29, Khulna. *University of Dhaka, Masters Thesis*.
- Smail, E; Ghafari, D.; Chakrabartty, JD; McLean, N; Lance, V A (2023) Potential Eutrophication indicator for the Global EEZ using a robust threshold as a criterion in support of UN SDG 14.1.1 (submitted)
- Chakrabartty, J.D., Islam, S., & Zakaria, A. (2018). Assessment of Environmental Condition of Dhaka South City Corporation (DSCC) using multi-criteria Analysis. *Journal of Urban and Environmental Engineering*.

AWARDS

- John A. Knauss Marine Policy Fellowship, NOAA (2023-2024): Selected for a prestigious fellowship focused for showcasing leadership in environmental policy and governance.
- SMSP Fellowship, University of Delaware (2019-2020): Awarded for academic excellence and contributions to marine science and policy research.
- Technical Scholarship, Bangladesh University of Engineering and Technology (2011-2015): Recognized for outstanding academic performance in a competitive engineering program.
- Board Scholarship, Ministry of Education, Bangladesh (2003, 2006): Honored for academic achievement at the national level in grades 5 and 8

LEADERSHIP & EXTRACURRICULAR INVOLVEMENTS

- **Senator**, Graduate Student Government, University of Delaware (2022-24): Represented graduate student interests, contributing to policy discussions and initiatives.

- **Reviewer**, Knauss Fellowship 2024, National Sea Grant Office: Evaluated applications and provided feedback for the prestigious fellowship, supporting the selection process for future marine policy leader for federal government.
- **Graduate Student Representative**, Director's Council, School of Marine Science and Policy (2021-22): Provided input on academic and administrative decisions, ensuring student perspectives were integrated into leadership discussions.
- **EmPOWER Mentor**, University of Delaware (2021-22): Advised and supported two graduate students, fostering their academic and professional growth.
- **Member**, Biden Institute Student Advisory Council, University of Delaware (2020-21): Collaborated with faculty and students to provide input on institute initiatives focused on public policy and leadership.
- **Vice President**, URP Student Association, BUET (2015-16): Led student activities and initiatives, enhancing engagement and collaboration within the student body