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CURRENT AFFILIATION

University of Minnesota, Applied Economics — Saint Paul, MN
Postdoctoral Associate — *Aug 2019 - present*

University of Minnesota - Duluth, Natural Resources Research Institute — Duluth, MN
Postdoctoral Associate — *Aug 2019 - present*

EDUCATION

University of New Mexico — Albuquerque, NM
Ph. D. in Economics — *Aug 2014 - July 2019*

University of New Mexico — Albuquerque, NM
M. A. in Economics — *July 2016*

University of Dhaka — Dhaka, Bangladesh
Master of Development Studies — *July 2013*

University of Dhaka — Dhaka, Bangladesh
MBA in Finance — *July 2010*

Bangladesh University of Engineering and Technology — Dhaka, Bangladesh
B. Sc. in Civil Engineering — *November 2006*

SCHOLARLY STATISTICS

- **Google Scholar Profile:** https://scholar.google.com/citations?hl=en&user=iEUMZPzBI94C
- **Github Profile:** https://github.com/mamun4105
- **Researchgate profile:** https://www.researchgate.net/profile/Saleh_Mamun
- **Publon profile:** https://publons.com/researcher/2630985/saleh-mamun/peer-review/

PUBLICATIONS

PEER REVIEWED

1. **Mamun, S.**, Castillo, A., Swedberg, K., Zhang, J., Boyle, K., Cardoso, D., Kling, C.L., Nolte, C., Papenfus, M., Phaneuf, D., & Polasky, S. (2023) "Valuing water quality in the US using a national data set on property values". Proceedings of the National Academy of Sciences. forthcoming.
2. **Mamun, S.**, Horn, B.P., & Chermak, J.M. (2020) "Private vs. Public Prisons? A Dynamic Analysis of the Long-Term Tradeoffs Between Cost and Recidivism Efficiency in the US Correction System" Applied Economics, p. 1-13.

3. **Mamun, S.**, Hansen, J.K., & Roni, M.S. (2020) "Supply, Operational, and Market Risk Reduction Opportunities: Managing Risk at a Cellulosic Biorefinery" Renewable and Sustainable Energy Reviews, 121, p.109677.
4. Bernknopf, R., Broadbent, C., Adhikari, D., **Mamun, S.**, Tidwell, V., Babis, C., & Pindilli, E. (2019) "Multi-Resource Analysis: An Analysis of Natural Resource Tradeoffs in the Piceance Basin, Colorado Using the Net Resource Assessment (NetRA) Proof of Concept and Decision Support Tool" U.S. Geological Survey Scientific Investigations Report 2019–5086, 1-40.
5. Hansen, J.K., Roni, M.S., Nair, S.K., Hartley, D.S., Griffel, L.M., Vazhnik, V., & **Mamun, S.** (2019) "Setting a baseline for Integrated Landscape Design: Cost and risk assessment in herbaceous feedstock supply chains" Biomass and Bioenergy, 130, 1-13.
6. Horn, B.P., Li, X., **Mamun, S.**, Guerrin, P., McCrady, B., & French, M.T. (2018) "The Economic Costs of Jail-Based Methadone Maintenance Treatment" . The American Journal of Drug and Alcohol Abuse, 44(6), 611-618.
7. Roni, M.S., Chowdhury, S., **Mamun, S.**, Marufuzzaman, M., Lein, W., & Johnson, S. (2017). "Biomass Co-Firing Technology with Policies, Challenges, and Opportunities: A Global Review". Renewable & Sustainable Energy Reviews, 78, 1089-1101.
8. Roni, M. S., Eksioglu, S. D., Jin, M., & **Mamun, S.** (2016)."A Hybrid Inventory Policy with Split Delivery under Regular and Surge Demand". International Journal of Production Economics, 172, 126-136.

PAPERS UNDER REVIEW

9. **Mamun, S.**, Dampha, N.K., Ricketts, T., Luers, A., & Polasky, S. "Investing in nature's contribution to climate solutions". (submitted to **Science**)
10. Nolte, C., Boyle, K.J., Chaudhry, A.M., Clapp, C.M., Guignet, D., Hennighausen, H., Kushner, I., Liao, Y., **Mamun, S.**,, Pollack, A., Richardson, J., Sundquist,S., Swedberg, K., & Uhl, J.H., "Studying the Impacts of Environmental Amenities and Hazards with Nationwide Property Data: Best Data Practices for Interpretable and Reproducible Analyses" (revise and resubmit at **PloS One**)
11. **Mamun, S.**, Nelson, E.J., & Nolte, C. "Estimating the impact of Critical Habitat designation on the values of undeveloped lots and houses". (submitted to **Land Economics**)
12. **Mamun, S.**, Mamkhezri, J., & Chermak, J.M. "Willingness to Pay for Mandated Renewable Energy: A Discrete Choice Experiment Study" (submitted to **Environmental and Resource Economics**)
13. Swedberg, K., Cardoso, D., Castillo, A., **Mamun, S.**, Boyle, K., Kling, C.L., Nolte, C., Papenfus, M., & Polasky, S. "Spatial Heterogeneity in Hedonic Price Effects for Lake Water Quality". (submitted to **Land Economics**)

WORKING PAPER

14. **Mamun, S.**, Nolte, C., & Polasky, S. "Nationwide lake impairment and property values". (**Job Market Paper**, preparing for **Journal of Environmental Economics and Management**)
15. **Mamun, S.**, McIntosh, C.R., & Polasky, S. "Forest Ecosystem Services Valuation: A Choice Experiment Approach". (preparing for **Society and Natural Resources**)
16. **Mamun, S.**, Sohngen, B., Smith, J., & Polasky, S. "Global current and potential forestry return maps". (preparing for **Forest Policy and Economics**)
17. Broadbent, C., Bernknopf, R., & **Mamun, S.**, "Spatial tradeoff between economic goods and ecosystem services: A case of the oil and gas industry". (preparing for **Applied Economics**)

PAPERS IN PREPARATION

18. "Conserving Nature Requires Metrics, Policies, and Money" (preparing for **Ecological Economics** with Polasky, S., Johnson, J.A., Bo, H., Dampha, N.K., Kula, L.; Long, Y., Maldonado, L., Strombom, E., & Takrar, S.)
19. "Improving land use and management to achieve multiple environmental and economic objectives" (preparing for **Nature** with Polasky, S., Hawthorne, P., Chaplin-Kramer, R., Gerber, J., Ruckelshaus, M., Russ, J., Schmitt, R., Smith, J., Vogl, A., Brauman, K., Chang, J., Charette-Castonguay, A., Daily, G., Douglass, J., Fay, M., Heger, M., Holden, M., Johnson, J., Khan, A., Kowal, G., Madden, I., Mandle, L., McDonald-Madden, E., Narain, U., Ouedraogo, I., Ruta, G., Rosa, L., Sohngen, B., West, P., Wolny, S., Zaveri, E. D., Damania, R.)
20. "Global gridded scenarios of fertilizer impacts on human and freshwater health" (with Schmitt, R., Madden, I., Kowal, G., Douglas, J., Hawthorne, P., Gerber, J., Brauman, K., Daily, G., Johnson, J., Mandle, L., Ouedraogo, I., Ekatpure, A. R., Ruckelshaus, M., Smith, J., Polasky, S., Vogl, A., Chaplin-Kramer, B.)
21. "Sustainability metrics: An embarrassment of riches" (with Polasky, S., Johnson, J.A., Bo, H., Dampha, N.K., Kula, L.; Long, Y., Maldonado, L., Strombom, E., & Takrar, S.)

OTHER REPORT

22. Polasky, S., Hawthorne, P., Chaplin-Kramer, R., Gerber, J., **Mamun, S.**, Ruckelshaus, M., Russ, J., Schmitt, R., Smith, J., Vogl, A., Brauman, K., Chang, J., Charette-Castonguay, A., Daily, G., Douglass, J., Fay, M., Heger, M., Holden, M., Johnson, J., Khan, A., Kowal, G., Madden, I., Mandle, L., McDonald-Madden, E., Narain, U., Ouedraogo, I., Ruta, G., Rosa, L., Sohngen, B., West, P., Wolny, S., Zaveri, E. D., Damania, R. (2022) "A Balancing Act: Efficiency, Sustainability, Prosperity" World Bank Report (In-press)
23. Martone, J., Hernandez, J., Tadros, M., Jimenez, E.J., Breidenbach, A., Juarez, R.A., **Mamun, S.**, & Ouattara, B. (2019). "Evaluation of ADVANCE at University of New Mexico (UNM) 2018-19 Annual Evaluation Report: An ADVANCE at University of New Mexico project Funded by the National Science Foundation (NSF)"

RESEARCH FUNDING AND GRANT SUBMISSIONS

- "Forest Health: Statewide Application of Forest Management Assessment Tool". 2021-2023. Senior Personnel on successful grant for $500,000 from Legislative-Citizen Commission on Minnesota Resources.
- "Designing sustainable development pathways for agricultural systems with integrated multi-scale modeling of socio-economic and natural capital". 2023-2026. Co-I on grant under consideration for $1.6 million at National Science Foundation.
- "Nature's benefits to people in Minnesota". 2023-2026. Lead PI on grant in preparation for $624,000 from Legislative-Citizen Commission on Minnesota Resources.
- "Climate Mitigation Through Improved Forest Understory Health". 2021. Co-PI on Legislative-Citizen Commission on Minnesota Resources grant for $179,000. Initial submission rejected with requested revisions. Currently revising for the next funding cycle.
- "Forest management and ecosystem services". 2020. Co-PI on Institute on Environment, UMN Impact Goals grant for $49,500. Initial submission rejected. Currently revising for the next funding cycle.

CONFERENCE AND INVITED TALKS *presented by co-author

1. **Mamun, S.**, McIntosh, C.R., & Polasky, S. (2022)"Forest Ecosystem Services Valuation: A Choice Experiment Approach". International Society of Forest Resource Economics (ISFRE) annual meeting, May 23-25, 2022, Traverse City, Michigan

2. **Mamun, S.**, Sohngen, B., Smith, J., & Polasky, S. (2022)"Global current and potential forestry return maps". International Society of Forest Resource Economics (ISFRE) annual meeting, May 23-25, 2022, Traverse City, Michigan
3. **Mamun, S.**, *Nelson, E.J., & Nolte, C. (2021-2022) "Estimating the impact of Critical Habitat designation on the values of undeveloped lots and houses".
    - North American Congress for Consevation Biology, July 16-21, 2022, Reno, Nevada
    - MEA 86th Annual Meetings, March 25-27, 2022, Minneapolis, Minnesota
    - 42nd Agricultural Law Education Symposium, November 4-6 2021, Salt Lake City, Utah
    - PLACES Webinar, June 28, 2021, Virtual.
4. *Broadbent, C., Bernknopf, R., & **Mamun, S.** "Spatial tradeoff between economic goods and ecosystem services: A case of the oil and gas industry". Western Economic Association Internation, July 01, 2021, Hawaii (Virtual).
5. **Mamun, S.**, Polasky, S., & Nolte, C. (2021) "Water Impairment, water quality, and property values". PLACES Webinar, June 29, 2021, Virtual.
6. *Clarke-Sather, A.R., **Mamun, S.**, Nolan, D., Schoff, P., Aro, M., & Ulrich, B. (2020) "Towards Prospective Sustainability Life Cycle Assessment". International Design Engineering Technical Conferences and Computers and Information in Engineering Conference, August 17, 2020, Virtual.
7. **Mamun, S.**, Roni, M.S., & Hansen, J.K. (2018). "Implementing Junction Tree Algorithm to Estimate Biomass In-feed Reactor Reliability". Idaho National Laboratory Intern EXPO, August 09, 2018, Idaho Falls, ID.
8. **Mamun, S.**, Thacher, J., & Chermak, J.M. (2018). "Geospatial and Individual Heterogeneity with Attribute Non-attendance and Importance Ranking in Renewable Portfolio Standard Discrete Choice Experiment", Department of Economics, Brigham Young University - Idaho, July 12, 2018, Rexburg, ID. (invited speaker)
9. *Horn, B.P., Li, X., **Mamun, S.**, Guerrin, P., McCrady, B., & French, M.T. (2018). "The Economic Impact of Jail-Based Medication Assisted Treatment: A Cost-Effectiveness Analysis of a Large Jail-Based Methadone Maintenance Treatment Program in New Mexico" W-EIGHTY Issues in Criminal Justice, CPDD 80th Annual Scientific Meeting, June 11, 2018, San Diego, CA.
10. **Mamun, S.**, Hansen, J.K., & Chermak, J.M. (2017). "Modeling Biomass Grower Payment in an Integrated Landscape Design Approach". Shared Knowledge Conference, University of New Mexico, November 8, 2017, Albuquerque, NM
11. **Mamun, S.**, & Hansen, J.K. (2017). "Modeling Biomass Grower Payment". Idaho National Laboratory Intern EXPO, August 11, 2017, Idaho Falls, ID.
12. Kalhor, E., Zemlick, K., Joshi, J., Walter, K., Mamkhezri, J., Lu, N., **Mamun, S.**, Thacher, J., & Chermak, J.M. (2017). "Modeling the Energy/Water Nexus in New Mexico". New Mexico EPSCoR, All Hands Meeting, April 27, 2017, Albuquerque, NM
13. **Mamun, S.**, Horn, B.P., & Chermak, J.M. (2017). "Cost and Recidivism Efficiency Trade-off: A Case of US Correction System". Shared Knowledge Conference, University of New Mexico, April 6, 2017, Albuquerque, NM

RESEARCH EXPERIENCE

Postdoctoral Associate, University of Minnesota, Aug 2019 - Present.

- **Integrated modeling**: I conducted several studies on multiple ecosystem services optimization. I use global level spatial data.
- **Non-market valuation**: I use both hedonic and choice experiment to understand the behavioral and market responses to environmental amenities and hazards. I use ZTRAX national level big transaction dataset.

- **Johnson-Polasky Lab**: As a senior member of JP lab, I took initiative to several projects and advised, guided, and facilitated student's success.

Research Assistant, University of New Mexico, Aug 2014 - July 2019.

- **The Science Impact Laboratory for Policy and Economics (SILPE)** (Aug 2017 - July 2019)
  - Research Assistant to Prof. Richard Bernknopf funded by United States Geological Survey (USGS)
  - Ongoing collaborative research work between USGS Science and Decisions Center, SILPE and Sandia National Laboratories.
  - Assessing the net resource value of natural resources in a complex 2 by 2 system.

- **Cradle to Career Policy Institute (CCPI)** (Jan 2019 - July 2019)
  - Research Assistant to Prof. Elizabeth Yakes Jimenez funded by National Science Foundation (NSF)
  - Project title: The ADVANCE at UNM.

- **The Center on Alcoholism, Substance Abuse, and Addictions (CASAA)** (Aug 2016 - July 2018)
  - Research Assistant to Prof. Brady P. Horn funded by National Institute of Health (NIH).
  - Project title: Understanding the Societal Value of the Health Improvements Associated with Providing Medication Assisted Treatment in a Large Urban Jail.

- **Established Program to Stimulate Competitive Research (EPSCoR), NM** (Jan 2017 - May 2017)
  - Research Assistant to Profs. Janie M. Chermak and Jennifer Thacher funded by National Science Foundation (NSF).
  - I am a part of The Social and Natural Science Nexus group. I am in charge of conducting a discrete choice experiment on Renewable Portfolio Standards.

Graduate Summer Intern, Idaho National Laboratory, Summer 2017 and Summer 2018.

- **Biomass Grower Payment**: Modeled biomass grower payment in an integrated landscape design approach.
- **Cellulosic Biorefinery Risk**: Compared risk and risk mitigation strategies in advanced vs conventional feedstock supply system.
- **Integrated Process Optimization for Biochemical Conversion**: Implemented junction tree algorithm to estimate the biomass in-feed reactor using probabilistic graphical theory.

TEACHING EXPERIENCE

- **Pedagogical Training and Development**: Graduate Teaching Academy Scholar holding a Certificate for College Teaching. I worked as Graduate Assistant at Center for Teaching Excellence where I design effective teaching techniques for graduate teaching assistants and faculties and assess evidenced-based learning outcomes.
- **Instructor**: ECON 106: Introductory Microeconomics - Online (Fall 2016), Number of students: 76, Teaching Evaluation: 4.38/5
- **Lab Instructor**: ECON 105: Introductory Macroeconomics (Fall 2014), Number of students: 93, Teaching Evaluation: 4.1/5, 3.8/5, and 3.7/5
- **Guest Lecturer**:
  - ECON 106: Introductory Microeconomics, Topic: Market disequilibrium and Public goods, 2 Lectures. Spring 2018 (UNM)

  - ECON 309: Introductory Statistics and Econometrics, Topic: Basic summary statistics, 1 Lecture, Fall 2016 (UNM)

- **Teaching Assistant** *graduate courses:
  - ECON 105: Introductory Macroeconomics (Fall 2014) with Prof. Christina Reiser
  - ECON 106: Introductory Microeconomics (Spring 2015) with Prof. Brady Horn
  - *ECON 501: Microeconomics I (Fall 2015) with Prof. Jennifer Thacher
  - *ECON 508: Statistics and Introduction to Econometrics (Fall 2015) with Prof. David Van-Dar-goes
  - *ECON 514: Macroeconomics II (Spring 2016) with Prof. Matias Fontenla
  - ECON 105 - online: Introductory Macroeconomics (Summer 2016) with Prof. Dave Dixon
  - ECON 106 - online: Introductory Microeconomics (Summer 2016) with Prof. Dave Dixon

PROFESSIONAL ACTIVITIES

- **Guest editor**: *Society and Natural Resources* (Impact factor: 3.12)
- Journal Reviewer - *Biofuels, Bioproducts and Biorefining; Bioenergy Research; GCB Bioenergy; Hydrobiologia; International Journal of Green Energy; Journal of Computational Economics; Nature Sustainability; Renewable and Sustainable Energy Reviews*
- Grant Reviewer, Graduate and Professional Student Association, UNM - Fall 2017
- Membership in American Economic Association

REFERENCES

Stephen Polasky
Regents Professor
Department of Applied Economics
University of Minnesota
✉: polasky@umn.edu
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☎: 612-625-9213

Janie M. Chermak
Professor
Department of Economics
University of New Mexico
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Kevin Boyle
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Director, Program in Real Estate
Virginia Polytechnic Institute and State University
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Christoph Nolte
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Department of Earth and Environment
Boston University
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