

# SALEH NUR MUHAMMAD AL-MAMUN

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## EDUCATION

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University of New Mexico Ph. D. in Economics	Albuquerque, NM <i>Aug 2014 - July 2019</i>
University of New Mexico M. A. in Economics	Albuquerque, NM <i>July 2016</i>
University of Dhaka Master of Development Studies	Dhaka, Bangladesh <i>July 2013</i>
University of Dhaka MBA in Finance	Dhaka, Bangladesh <i>July 2010</i>
Bangladesh University of Engineering and Technology B. Sc. in Civil Engineering	Dhaka, Bangladesh <i>November 2006</i>

## CURRENT AFFILIATION

University of Minnesota, Applied Economics Postdoctoral Associate	Saint Paul, MN <i>Aug 2019 - present</i>
University of Minnesota - Duluth, Natural Resources Research Institute Postdoctoral Associate	Duluth, MN <i>Aug 2019 - present</i>

## RESEARCH INTERESTS

Primary field: Environmental and natural resource economics, energy economics, agricultural economics  
Secondary field: Public economics, health economics

## TEACHING INTERESTS

Environmental Economics, Natural Resource Economics and Ecological Modeling, Quantitative and Mathematical Economics, Econometrics, Microeconomics, Introductory and Intermediate Macroeconomics, Energy Economics, Public Economics, Agricultural Economics, Managerial Economics

## SCHOLARLY STATISTICS

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- **Google Scholar Profile:** <https://scholar.google.com/citations?hl=en&user=iEUMZPzBI94C>
- **Researchgate profile:** [https://www.researchgate.net/profile/Saleh\\_Mamun](https://www.researchgate.net/profile/Saleh_Mamun)
- **Publons profile:** <https://publons.com/researcher/2630985/saleh-mamun/peer-review/>

## PUBLICATIONS

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### PEER REVIEWED

1. **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.
2. **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.
3. 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.
4. 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.
5. 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.
6. 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.
7. Roni, M. S., Eksioğlu, 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.

### PENDING PAPERS

8. **Mamun, S.**, Thacher, J., & Chermak, J.M., “Discrete Choice Experiment on Renewable Portfolio Standards to Map Household Preferences” (preparing for **Energy Policy**)
9. **Mamun, S.**, & Chermak, J.M. “Joint Production of Natural Gas and Oil in the Presence of Externalities” (preparing for **Journal of Environmental Management**)
10. **Mamun, S.** “Effect of Agricultural Extension on Climate Change Adaptation: Evidence from Bangladesh” (preparing for **Journal of Environmental Economics and Policy**).
11. **Mamun, S.** “Impact of Clean Development Mechanism on Environmental Performance” (preparing for **World Development**).

### OTHER REPORT

12. 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)”

## CONFERENCE \*presented by co-author

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1. \*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 International, July 01, 2021, Hawaii (Virtual).
2. **Mamun, S.**, Polasky, S., & Nolte, C. (2021) “Water Impairment, water quality, and property values”. PLACES Webinar, June 29, 2021, Virtual.
3. **Mamun, S.**, \*Nelson, E.J., & Nolte, C. (2021) “Estimating the impact of Critical Habitat designation on the values of undeveloped lots and houses”. PLACES Webinar, June 28, 2021, Virtual.
4. \*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.
5. **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.
6. **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)
7. \*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.
8. **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
9. **Mamun, S.**, & Hansen, J.K. (2017). “Modeling Biomass Grower Payment”. Idaho National Laboratory Intern EXPO, August 11, 2017, Idaho Falls, ID.
10. 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
11. **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

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

- Working closely with mentor Stephen Polasky.
- **Forest Optimization:** Life Cycle Analysis of forest harvest production. Optimization of forest harvest considering market and non-market forest services.
- **Natural Capital Project:** Working on The World Bank Natural Capital Index project. The goal is to find optimized land use land cover at global scale and rank countries based on natural capital.

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

- **The Science Impact Laboratory for Policy and Economics (SILPE)** (Aug 2017 - present)
  - 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

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- **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

## OTHER WORK EXPERIENCE

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- **Associate**, Microcredit Regulatory Authority, Dhaka, Bangladesh Jan 2011 - Jul 2014.
  - Lead on **performance evaluation project** of Microfinance Institutions by researching on grading criteria for regulatory compliance and financial performance. The grading is similar to credit rating institutional grading.
  - Conducted **research on Microfinance** as a team member and **data management** for different regulatory reporting.
  - Assisted **survey design** and lead on **survey implementation** to collect microfinance and women empowerment data by household survey.
  - Conducted **microfinance and regulatory training** for 50 senior managers of Central Bank of Nigeria (**CBN**) and Nigeria Deposit Insurance Corporation (**NDIC**) to develop their regulation skills, training for microfinance professionals in Bangladesh to develop best practices in microfinance.
- **Product Officer (MT)**, Singer Bangladesh Limited, Dhaka, Bangladesh, Sep 2010 - Jan 2011.
  - Lead on **market research** and feasibility of new **product launching**. Launched Pureit (water filter) in Singer Bangladesh Network.
  - Analyzed **product demand** and procure products (from China and Korea)
  - **Trained 300 sales personnels and shop managers** to develop sales and after sales services strategies.
- **Civil Works Coordinator**, M/S Ataur Rahman Khan, Dhaka, Bangladesh, Dec 2006 - Feb 2008.
  - **Designed and supervised** 30 telecommunication sites in Northwestern Bangladesh.
  - Prepared Bill of Quantities (BOQ), Request for Proposal (RFP) and Request for Quote (RFQ) for various government projects in Bangladesh.

## ANALYTICAL PROFICIENCY

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- **Programming Languages:** extensively used **R** and **Python**.
- **Risk and Decision Analysis:** proficient in **@Risk and DecisionTools Suite** of Palisade Corporation.
- **Modeling and Simulation:** used **Powersim 10** for dynamic optimization and introductory knowledge of **Repast** for Agent Based Modeling.
- **Statistical analysis software:** comfortable with **STATA** and **mata** programming.
- **Geographic information system:** used **ArcGIS**, **QGIS** with **pyqgis** to conduct spatial analysis and remote sensing.
- **Reporting and Visualization:** proficient in **Latex**, **Lyx**, **Microsoft Word**, **Microsoft Excel**.

## ACADEMIC HONORS

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- Graduate Teaching Academy Scholar, Center for Teaching and Learning (CTL), 2018 - present
- Research/Graduate/Teaching Assistantship, University of New Mexico, 2014 - 2019
- Distinction in Microeconomics core examination, Aug 2015
- Distinction in Econometric core examination, Dec 2015
- Summer graduate internship at Idaho National Laboratory, 2017 and 2018
- Summa Cum Laude, Master of Development Studies, University of Dhaka, 2013
- Technical scholarship, Bangladesh University of Engineering and Technology (BUET), 2001-2006

## PROFESSIONAL ACTIVITIES

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- Journal Reviewer - *Biofuels, Bioproducts and Biorefining; GCB Bioenergy; International Journal of Green Energy, Bioenergy Research*
- Grant Reviewer, Graduate and Professional Student Association, UNM - Fall 2017
- Membership in American Economic Association

## LANGUAGES

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Proficient in English and Bengali (native). Working knowledge of Hindi.