

# Agha Ali Akram

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I am an applied economist with over twelve years of experience **designing and executing rigorous quantitative impact evaluations** using a range of evaluation methodologies (including RCTs) across multiple industry sectors including **agriculture, climate change, water, public health and energy**; building economic **cost-benefit analyses**; cleaning, managing and **statistically analysing large and complex datasets**; and effectively **communicating technical content** to semi-technical policy audiences.

## Education

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*Ph.D. Environmental Economics*, YALE UNIVERSITY, 2015

*Masters Environmental Management*, YALE UNIVERSITY, 2008

*B.Sc. Computer Science and History*, LAHORE UNIVERSITY OF MANAGEMENT SCIENCES, 2004

## Work Experience

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**MATHEMATICA POLICY RESEARCH, 2022 – PRESENT**

*Senior Researcher*

- Built a cost-benefit analyses that integrated enteric disease model outputs and climate change to assess a wastewater monitoring program (funded by Rockefeller Foundation); co-authored research paper from this work.
- Served as project director for a USAID-funded water access and quality investment project in Uganda, leading the design and implementation of cost-benefit modelling and analysis.
- Quantitative impact evaluation lead for a Bill & Melinda Gates Foundation-funded multicounty evaluation of a private sector agricultural extension program in Africa, ensuring that the evaluation design and associated measurement activities addressed the research agenda in a scientifically rigorous way.
- Serve as deputy project director for a Bill & Melinda Gates Foundation-funded market test of a nutritional supplement (balanced energy and protein) for pregnant and lactating women in Pakistan, contributing to quantitative data collection and analysis as part of the project monitoring, learning, and evaluation (MLE) activities.
- Conducted research, key informant interviews, and technical writing to assess renewable energy landscape in the Caribbean, analyzing renewable energy targets, generation (status and gaps), financing needs, and institutional conditions.
- Served as the quantitative analysis lead for an evaluation of a family planning project in Indonesia,

**DIME WORLD BANK, 2021 – 2022**

*Consultant*

Co-led the design, testing and deployment of a large-scale global water utility survey with the aim of understanding key performance indicators and management practices.

**UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP), 2017 – 2022**

*Economist*

- Managed a team of data analysts to provide design input and quality control for a portfolio of impact evaluations using a diverse set of impact evaluation methodologies (cluster randomized trials, matching and difference-in-difference designs) across 11 countries for a range of climate change adaptation projects.
- Developed economic cost-benefit analysis models, analysed results and authored reports for climate change adaptation and risk management projects in Pakistan, Bangladesh and Nepal valued at over \$100 million.
- Lead the development of baseline and endline reporting guidelines to be used across the UNDP impact evaluations portfolio.
- Developed content for and led sessions on cost benefit analysis and impact evaluation for workshops with UNDP and government personnel across multiple countries.

- Led dialogue with academic partners to provide technical guidance to develop UNDP's global electricity access map.

#### **LAHORE UNIVERSITY OF MANAGEMENT SCIENCES, 2018 – 2022**

##### ***Assistant Professor of Economics***

Research; and teaching: Quantitative methods for impact evaluation, climate change economics, development economics, environmental and resource economics, health economics.

#### **UNITED NATIONS FOOD AND AGRICULTURE ORGANIZATION (FAO), 2016 – 2020**

##### ***Agricultural Economist***

- Designed, tested and deployed a large-scale impact evaluation that used difference-in-differences combined with coarsened exact matching of a climate change adaptation project in Thailand covering a total of 600 farmers, as part of the Integrating Agriculture in National Adaptation Plans (NAP-Ag).
- Led dialogue with government (Ministry of Agriculture and Cooperatives), private sector researchers (Thailand Development Research Institute) and FAO to develop impact evaluation and survey design.
- Developed a cost-benefit analysis model with a highly usable interface (Excel) and detailed user manual that enabled policymakers to run their own analyses for Thailand climate change adaptation project; I integrated the results from the large-scale impact evaluation into this cost-benefit model.
- Designed and delivered three multi-day training events over 50 FAO and government personnel (in Thailand and Uruguay) on design and analysis of impact evaluations for NAP-ag project.
- Wrote technical guidance materials on impact evaluation, including an Impact Evaluation Manual and a case study describing the large-scale impact evaluation climate change adaptation project in Thailand.

#### **YALE UNIVERSITY, 2016 – 2017**

##### ***Visiting Fellow***

Collaborated with Dr. Robert Mendelsohn to develop publications from my work on drinking water and irrigation in agriculture (see co-authored papers with Mendelsohn in list of publications).

#### **EVIDENCE ACTION, 2014 – 2016**

##### ***Postdoctoral Fellow***

- Co-PI on a project that measured the direct and spill-over impacts of a seasonal migration subsidy using a saturation design randomized controlled trial with 5,792 participants across 133 villages in Bangladesh (with Mushfiq Mobarak, Yale University and Shyamal Chowdhury, University of Sydney). Managed academic and research implementation partners; conducted statistical and econometric analysis; co-authored academic paper and briefs.
- Initiated entry of, and built and managed partnership to establish Evidence Action's Deworm the World Initiative in Pakistan, including liaison with the Punjab Government and local implementing partners.
- Co-designed an evaluation of conditional cash transfers to increase vaccination rates in Pakistan (with Rachel Glennerster, University of Chicago and Esther Duflo, MIT).

#### **UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP), 2012 – 2014**

##### ***Research Consultant***

- Created and conducted five multi-day training sessions (in Thailand and Bangladesh) on cost-benefit analysis, statistical analysis and GIS for government officers as part of the Capacity Building Program on the Economics of Climate Change Adaptation (ECCA).
- Designed and tested a survey instrument that was deployed across five countries in Asia-Pacific to understand the impact of climate change on agriculture (1,429 farmers).
- Co-authored the "Economics of Adaptation Toolkit" and created guidance notes for and conducted sessions with UNDP personnel on design of rigorous impact evaluation for projects in Samoa and Africa.

#### **INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE (IFPRI), 2012**

**Consultant**

- Designed and developed survey instruments to collect water use data in irrigated agriculture in Pakistan; incorporated in IFPRI's Pakistan Rural Household Panel (2012-2014) which surveyed 2,090 households.
- Conducted institutional mapping exercise across multiple government and non-governmental stakeholders and co-authored a report on the policy landscape of agricultural water management in Pakistan.

**WORLD CONSERVATION UNION (IUCN), 2005 – 2006****Program Assistant**

Conducted research and wrote short reports on the Clean Development Mechanism and its potential in Pakistan.

**LAHORE UNIVERSITY OF MANAGEMENT SCIENCES, 2004 – 2005****Research Assistant and Team Leader**

Designed and led the development of an innovative approach to urban air pollution monitoring, the Volunteer Internet-based Environment Watch (finalist at the Stockholm Challenge 2006) and secured \$73,400 in funding.

## Research

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**Working Papers**

- “Do Conservation Messages Save Water in Unmetered Settings? Results from an Experimental Study in Islamabad” with Sanval Nasim and Syed Hasan (Lahore University of Management Sciences, Pakistan)
- “Balancing Climate Change Adaptation and Profitability in Agriculture: The potential of a diversification-based climate adaption from Thailand” with Kannika Thampanishvong (Thailand Development Research Institute)
- “Do effective weather information services for farmers exist? The potential of PICSA to drive farmer adaptation to climate change – evidence from Malawi” with Babatunde Abidoye (UNDP) and Alefa Banda (UNDP).
- “Labor Market Impacts of a Mental Health Intervention for Vulnerable Youth in Sierra Leone” with Leslie Alex (IPA), Jordan Farrar (Boston College), Robert T. Brennan (Boston College), Ryan Borg (Boston College), Arja Dayal (IPA), Simo Goshev (Boston College) and Theresa S. Betancourt (Boston College); [Poverty Action policy brief](#).
- “Effects of Emigration on Rural Labor Markets” with Mushfiq Mobarak (Yale University) and Shyamal Chowdhury (Sydney University); [National Bureau of Economic Research working paper No. w23929](#); [Innovations for Poverty Action policy brief](#); [Copenhagen Consensus Smarter Solutions for Bangladesh](#).

**Papers under review**

Keshaviah, A., **Akram, A. A.**, Rizmie, D., Raxter, I., Hasan, R., Rahman, Z., Suchana, A., Jahan, F., Rahman, A., Rahman, M., Rahman, M., Diamond, M. & D’Agostino, A. (2024). A cost-benefit analysis of using wastewater monitoring to guide typhoid vaccine campaigns. Under review. *Water Emerging Contaminants and Nanoplastics*.

**Akram, A. A.** & H. Majid (2024). Inclusivity, Gender and Online Gains: Are online education platforms the answer? Revise and resubmit. *Journal of Economics, Race and Policy*.

Abidoye, B., **Akram, A. A.**, Kannan, S. & Omotoso, K. (2024). The impact of climate change on African agriculture: A Ricardian Analysis of smallholder farmers in sub-Saharan Africa. Revise and resubmit. *Climatic Change*.

**Published papers**

Khalid, H., Firdous, U., Jadoon, A., Stecher, C., Akram, A. A., & Fox, A. M. (2024). Can high-profile endorsements improve COVID-19 vaccine uptake and reduce hesitancy in Pakistan?. *SSM-Health Systems*, forthcoming.

**Akram, A. A.**, & Mendelsohn, R. (2021). Diaries to Increase the Adoption of Chlorine Tablets for Water Purification by Poor Households. *Water Economics and Policy (WEP)*, 7(02), 1-34.

- Hasan, S. M., **Akram, A. A.**, & Jeuland, M. (2021). Awareness of coping costs and willingness to pay for urban drinking water service: Evidence from Lahore, Pakistan. *Utilities Policy*, 71, 101246.
- Akram, A. A.**, & Mendelsohn, R. (2017). Agricultural water allocation efficiency in a developing country canal irrigation system. *Environment and Development Economics*, 1-23.
- Mobarak, Mushfiq & **Akram, A. A.** (2016). Seasonal Migration to Increase Incomes of Poor Households in Bangladesh. *Bangladesh Priorities*, Copenhagen Consensus.
- Akram, A. A.** (2013), "Is a surface-water market physically feasible in Pakistan's Indus Basin Irrigation System?" *Water International*, Vol. 38, Issue 5.
- Aberman, Noora-Lisa, Wielgosz, Benjamin, Zaidi, Fatima, Ringler, Claudia, **Akram, A. A.**, Bell, Andrew Reid & Issermann, Maikel, (2013), "The policy landscape of agricultural water management in Pakistan", No. 1265, *IFPRI Discussion Papers*, International Food Policy Research Institute (IFPRI).
- Akram, A. A.** & Olmstead, S. M. (2011), "The Value of Household Water Service Quality in Lahore, Pakistan", *Environmental and Resource Economics*, Volume 49, Number 2, 173-198.
- Akram, A. A.** (2009). "Indus Basin Water Resources", *Tiempo*, No. 70.
- Akram, Agha Ali** & Ikram, M. J. (2007). "Air pollution monitoring through a volunteer internet-based network", *Environment and Urbanisation*, April 2007.
- Akram, A. A.** (2006). "The Conflict Between Russia and Chechnya: A Historical Analysis", *Islamabad Papers*, Institute of Strategic Studies in Islamabad.

## Scientific Peer Review Service

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- Environment and Development Economics
- Climate Change Economics
- International Journal of Water Resources Development
- Journal of Environmental Management
- Water Economics and Policy
- National Science Foundation
- Unjournal
- BRAC
- Biological Conservation

## Other Professional Activities

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- Associate and Director, WASH (Water, Sanitation, Hygiene) Programs, IRD-PAKISTAN
- Research Fellow, CENTER FOR ECONOMICS RESEARCH IN PAKISTAN
- Research Affiliate, INSTITUTE FOR DEVELOPMENT AND ECONOMICS ALTERNATIVES
- Research Affiliate, CONSORTIUM FOR DEVELOPMENT POLICY RESEARCH
- Fellow, MAHBUB-UL-HAQ RESEARCH CENTER (LUMS)

## Scholarships and Awards

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### Agency Fund (2022), \$250,000

CHWs vs Phonecasts for Child Growth in Pakistan. With Parves Shonchoy (Florida International University), Akib Khan (Uppsala University), Takashi Kurosaki (Hitotsubashi University) and Uzma Afzal (Lahore University of Management Sciences).

### USAID Development Innovation Ventures (2021), \$200,000

Water purification: The roles of learning, habit formation & social norm. With Reshma Hussam (Harvard University), Akib Khan (Uppsala University) and Gabriella Fleischman (Harvard University).

**LUMS Faculty Initiative Fund (2021), \$6,550**

Impact of low-cost demand-augmenting and price information provision services to reduce spoilage for street-vendors selling fresh produce. With Saher Asad (Lahore University of Management Sciences, Pakistan).

**Kurita Water and Environment Foundation Grant (2020), \$3,720**

Promoting water purification: The role of learning, habit formation, and social norms (Pakistan).

**LUMS Faculty Initiative Fund (2020), \$6,200**

Increasing contraceptive uptake in Pakistan, in collaboration with Rahnuma Family Planning Association of Pakistan. With Faisal Bari (Lahore University of Management Sciences, Pakistan) and Mahrukh Khan (Center for Economic Research in Pakistan).

**LUMS Faculty Initiative Fund (2020), \$6,480**

Online teaching platforms: A panacea to Pakistan's educational woes. With Hadia Majid (Lahore University of Management Sciences, Pakistan).

**World Bank Strategic Impact Evaluation Fund (2018), \$93,800**

Reducing child stunting through better learning, in collaboration with Sukoon Water (Pakistan). With Parves Shonchoy (Florida International University), Akib Khan (Uppsala University), Takashi Kurosaki (Hitotsubashi University) and Hina Khalid (Information Technology University, Pakistan).

**World Bank Strategic Impact Evaluation Fund (2018), \$94,500**

Improved learning and habit formation to increase uptake of health technologies (chlorine) in the developing world, in collaboration with Interactive Research and Development. With Jed Friedman (World Bank), Reshma Hussam (Harvard University), Gabriella Fleischman (Harvard University) and Akib Khan (Uppsala University).

**Shahid Hussain Foundation (2019), \$7,060**

Reducing child stunting through better learning. With Hina Khalid (Information Technology University, Pakistan).

**LUMS Faculty Initiative Fund (2018), \$8,210**

A randomized controlled trial to assess effectiveness of the in-home Growth Monitoring Tool (GroMoTo) in addressing childhood stunting

**National Science Foundation (2012), \$31,000**

Doctoral Dissertation Research Improvement Grant for Research in Economics; used to fund my dissertation research on improving chlorine tablet uptake by poor households in Pakistan. With Robert Mendelsohn (Yale University).

**Yale Institute of Biospheric Studies Grant (2012), \$5,000**

Water Use in Pakistan's Agriculture: Efficient Water Allocation in Pakistani Agricultural Production. With Robert Mendelsohn (Yale University).

**John F. Enders Fellowship (2012), \$3,000**

Improving drinking water quality amongst poor households in Pakistan.

**Tropical Resources Institute Fellowship (2010), \$4,450**

Assessing Climate Change Impacts on Agricultural Input Choices. With Sheila Olmstead and Robert Mendelsohn (Yale University).

**Environment Protection Agency, Government of Punjab (2008), \$58,700**

Volunteer internet-based environment watch (version 2). With Jahangir Ikram (Lahore University of Management Sciences, Pakistan).

**Fulbright Scholarship (2006)**

Funding for Masters in Environmental Management at Yale University.

**Leland Burt Scholarship (2006)**

Funding for Masters in Environmental Management at Yale University.

**PTCL R&D Fund (2004), \$14,700**

Volunteer internet-based environment watch (version 1). With Jahangir Ikram (Lahore University of Management Sciences, Pakistan).

## **Professional References**

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**Dr. Pradeep Kurukulasuriya**

*Executive Coordinator and Director-Environmental Finance for Nature, Climate and Energy*

United Nations Development Programme (UNDP)

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**Dr. Robert Mendelsohn**

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