

**ASIF ISHTIAQUE**

[AsifIshtiaque@MissouriState.edu](mailto:AsifIshtiaque@MissouriState.edu)

Phone: 480-358-5962

Website: [www.asifishtiaque.com](http://www.asifishtiaque.com)

Mail: Department of Geography, Geology  
and Planning, Temple 337,  
901 S. National Ave., Springfield  
MO 65897, United States

**EMPLOYMENT**

- August 2022-  
Present                      Assistant Professor  
Department of Geography, Geology and Planning  
Missouri State University  
Springfield, USA
- September 2021 –  
June 2022                      Postdoctoral Research Fellow  
School for Environment & Sustainability  
University of Michigan, Ann Arbor, USA.  
Research Project: *Sowtime: Climate adaptive agriculture in the EGP.*  
Sponsor: NASA  
PI: Josh Gray (North Carolina State University); Co-PI: Meha Jain, Arun  
Agrawal (University of Michigan)
- September 2020 –  
August 2021                      Postdoctoral Research Fellow  
School for Environment & Sustainability  
University of Michigan, Ann Arbor, USA.  
Research Project: *Impacts of groundwater depletion and warming temperature on  
agriculture in India.*  
Sponsor: University of Michigan  
PI: Meha Jain (University of Michigan)
- September 2019 –  
August 2020                      Postdoctoral Research Fellow  
School for Environment & Sustainability  
University of Michigan, Ann Arbor, USA.  
Research Project: *The Future of Food Security in India: Can Farmers Adapt to  
Environmental Change?*  
Sponsor: NASA  
PI: Meha Jain (University of Michigan); Co-PI: David Lobell (Stanford  
University), Ram Fishman (Tel Aviv University), Balwinder Singh  
(CIMMYT India)
- August 2014 –  
May 2019                      Graduate Teaching Assistant  
School of Geographical Sciences and Urban Planning  
Arizona State University. Tempe, USA
- May 2016 –  
August 2016                      Graduate Research Associate  
School of Sustainability

Arizona State University, Tempe, USA  
Research Project: *Science driven, community-based approach to reducing glacial lake outburst flood risks*  
Sponsor: NSF

February 2012 – Undergraduate Intern  
May 2012 United States Agency for International Development (USAID)  
Dhaka, Bangladesh  
Project: Integrated Protected Area Co-management

## EDUCATION

|             |     |   |
|-------------|-----|---|
| 2014 – 2019 | PhD | School of Geographical Sciences and Urban Planning<br>Arizona State University, USA.<br>Dissertation: <i>Multilevel governance of climate adaptation management in coastal areas: Evidence from Bangladesh.</i><br>Committee: Hallie Eakin (Co-Chair), Netra Chhetri (Co-Chair), Soe Myint. |
| 2011 – 2013 | MS  | Major: Disaster Management<br>Department of Geography & Environment, University of Dhaka, Bangladesh.   |
| 2007 – 2011 | BS  | Department of Geography & Environment, University of Dhaka, Bangladesh.   |

## RESEARCH INTERESTS

Climate change adaptation; Sustainability; Environmental Management; Environmental governance; Agriculture; Resilience and Vulnerability; Environmental justice; Land use/land cover change.

## PUBLICATIONS

Citations: 733  
h-index: 14  
i10-index: 15

[GOOGLE SCHOLAR PROFILE](#)

**PEER REVIEWED JOURNAL ARTICLES**

- 2022**
1. **Ishtiaque, A.**, Estoque, R., Eakin, H., Parajuli, J., and Rabby, Y.W. (2022) [IPCC's current conceptualization of 'vulnerability' needs more clarification for climate change vulnerability assessments](#). *Journal of Environmental Management* 303: 114246.
  2. **Ishtiaque, A.**, Singh, S., Lobell, D., Singh, B., Fishman, R., Jain, M. (2022) [Prior season crop management constrains farmer adaptation to warming temperature: Evidence from the Indo-Gangetic Plains](#). *Science of the Total Environment* 807(2): 151671.
  3. Gardezi, M., Semhar, M., Stock, R., Vij, S., Ogunyiola, A., **Ishtiaque, A.** (2022) [Prioritizing climate smart agriculture \(CSA\): An organizational and temporal review](#). *WTREs Climate Change*. WCC755.
  4. Lewis, D., Rahman, M.F., Twinomuhangi, R., Haque, S., Huq, N., Huq, S., Ribbe, L., **Ishtiaque, A.** (2022) [University-based researchers as knowledge brokers for climate policies and action](#). *The European Journal of Development Research* (Available online).
- 2021**
5. **Ishtiaque, A.**, Eakin, H., Chhetri, N., Vij, S., Rahman, F., Huq, S. (2021) [Multilevel governance in climate adaptation in Bangladesh: structure, processes, and power dynamics](#). *Regional Environmental Change* 21: 75.
  6. **Ishtiaque, A.**, Stock, R., Vij, S., Eakin, H., and Chhetri, N. (2021) [Beyond the barriers: An overview of mechanisms driving barriers to adaptation in Bangladesh](#). *Environmental Policy & Governance* 31: 316-329.
  7. Vij, S., Biesbroek, R., Stock, R.J., Gardezi, M., **Ishtiaque, A.**, Groot, A., Termeer, K. (2021) ['Power Sensitive Design Principles' for climate change adaptation policy-making in South Asia](#). *Earth System Governance* 9: 100109.
  8. Ali, U., Wang, J., Ullah, A., **Ishtiaque, A.**, Javed, T. and Nurgazina, Z. (2021) [The impact of climate change on the economic perspectives of crop farming in Pakistan: Using the Ricardian Model](#). *Journal of Cleaner Production* 308: 127219.
- 2020**
9. **Ishtiaque, A.**, Masrur, A., Rabby, Y.W., Jerin, T., and Dewan, A. (2020) [Remote sensing-based research for monitoring progress towards SDG 15 in Bangladesh: A review](#). *Remote Sensing* 12 (4): 691. (selected as an Editor's Choice Article)
  10. Rabby, Y.W., **Ishtiaque, A.**, and Rahman, M.S. (2020) [Evaluating the effects of Digital Elevation Models in landslide susceptibility mapping in Rangamati district, Bangladesh](#). *Remote Sensing* 12 (17): 2718. (Invited paper, SI: Remote Sensing of Natural Hazards)
  11. Stock, R.J., Vij, S., and **Ishtiaque, A.** (2020) [Powering and puzzling in climate change adaptation policies in Bangladesh & India](#). *Environment, Development and Sustainability* 23: 2314-2336.
- 2019**
12. **Ishtiaque, A.**, Eakin, H., Chhetri, N., Myint, S., Dewan, A., and Kamruzzaman, M. (2019) [Examining coastal vulnerability frameworks at multiple levels of governance using spatial MCDA approach](#). *Ocean & Coastal Management* 171: 66-79. (SI: Vulnerability Assessment as a Tool for the Coastal and Marine Hazard Management)
  13. Chhetri, N., Stuhlmacher, M., and **Ishtiaque, A.** (2019) [Nested pathways to adaptation](#). *Environmental Research Communications* 1: 015001.

- 2018** 14. Estoque, R., Myint, S.W., Wang, C., **Ishtiaque, A.**, Aung, T.T., Ooba, M., Emerton, L., Mon, M.S., Wang, Z., and Fan, C. (2018) [A new estimate of mangrove forest cover changes in Myanmar \(2000 to 2014\): Assessing Environmental Impacts](#). *Global Change Biology* 24 (11): 5391-5410.
- 2017** 15. **Ishtiaque, A.**, Sangwan, N., and Yu, D. (2017) [Robust-yet-fragile nature of partly engineered coastal social-ecological systems: a case study of coastal Bangladesh](#). *Ecology & Society* 22 (3): 5.
16. **Ishtiaque, A.**, Shrestha, M., and Chhetri, N. (2017) [Rapid urbanization in the Kathmandu valley, Nepal: Monitoring land use land cover dynamics with Landsat imagery](#). *Environments* 4 (4): 72. (Invited paper, SI: Sustainable Territorial Management)
17. **Ishtiaque, A.** and Nazem, N. I. (2017) [Household level disaster induced losses and rural-urban migration: Experience from world's one of the most disaster affected countries](#). *Natural Hazards* 86: 315-326.
- 2016** 18. **Ishtiaque, A.** and Chhetri, N. (2016) [Competing policies to protect mangrove forest: A case from Bangladesh](#). *Environmental Development* 19: 75-83.
19. **Ishtiaque, A.**, Myint, S.W., and Wang, C. (2016) [Examining the ecosystem health and sustainability of world's largest mangrove forest using multi-temporal MODIS products](#). *Science of the Total Environment* 569-570: 1241-1254.
- Pre 2016** 20. **Ishtiaque, A.** and Ullah, M.S. (2013) [The influence of factors of migration on the migration status of rural-urban migrants in Dhaka, Bangladesh](#). *Human Geographies* 7 (2): 45.
21. Mahmud, M. S., Masrur, A., **Ishtiaque, A.**, Haider, F., and Habiba, U. (2011) [Remote sensing & GIS based spatio-temporal change analysis of Wetland in Dhaka City, Bangladesh](#). *Journal of Water Resource and Protection* 3 (11), 781.

### **BOOK CHAPTERS AND REPORTS**

1. **Ishtiaque, A.** (2021) Multilevel governance of climate change adaptation: Conceptual clarification and future outlook. In Ali, F. (edt.) *Climate Change and Extreme Events*. Elsevier: the Netherlands. pp. 171-185.
2. **Ishtiaque, A.** (2020) Bangladesh Flood. In Paul, B.K (edt.) *Natural Hazards and Disasters: From Avalanches and Climate Change to Water Sprouts and Wildfire*. Volume 1. ABC-Clio: Santa Barbara, USA.
3. Riadh, S.M., Chowdhury, R.M. and **Ishtiaque, A.** (2012) Community based Climate Change Adaptation Plan, a report prepared for USAID Bangladesh under IRG supervision, Dhaka.

## PRESENTATIONS

### *Oral Presentations*

\* represents presenting author

1. **Ishtiaque, A.\*** and Jain, M. (2022) Prior cropping season decisions constrain farmers to adapt: Evidence from Indo-Gangetic Plains, paper presented at the *AAG Conference 2022* held on February 25 – March 01 (online).
2. **Ishtiaque, A.** and Eakin, H.\* (2019) Multilevel adaptation governance in Bangladesh, paper presented at the *Earth System Governance Conference* held on November 6 – 8 at Oaxaca, Mexico.
3. **Ishtiaque, A.\*** (2019) How do barriers emerge in adaptation governance in Bangladesh: A mechanism-based explanation, paper presented at the *Sustainability and Development Conference* held on October 11 – 14 at Ann Arbor, Michigan, USA.
4. **Ishtiaque, A.\*** (2019) Multilevel adaptation governance in Bangladesh: Structure, processes, power dynamics, paper presented at the *AAG Conference 2019* held on April 03 – 07 at Washington DC, USA.
5. **Ishtiaque, A.\*** (2018) Multilevel governance of climate change vulnerability management in coastal social-ecological systems: Evidence from Bangladesh, paper presented at the *AAG Conference 2018* held on April 10 – 14 at New Orleans, Louisiana, USA.
6. **Ishtiaque, A.\*** and Yu, D. J. (2017) Resilient-yet-vulnerable: A case of scale challenges posed by adaptation actions in coastal Bangladesh, paper presented at the *AAG Conference 2017* held on April 05 – 09 at Boston, Massachusetts, USA.
7. Myint, S.W.\*, Wang, C., and **Ishtiaque, A.** (2017) A space-time analysis approach to tackle some emerging environmental issues, paper presented at the *Annual World Bank Conference on Land and Poverty* held on March 20 – 24 at Washington DC, USA.
8. **Ishtiaque, A.\***, Myint, S.W., and Wang, C. (2016) Modeling spatiotemporal dynamics in Sundarban, paper presented at the *AAG Conference 2016* held on March 29 – April 02 at San Francisco, California, USA.
9. **Ishtiaque, A.\*** and Yu, D. J.\* (2015) Robustness of a coupled infrastructure system: A case of Southwest Bangladesh, paper presented at the satellite session on ‘The robustness of coupled infrastructure and complexity’ at the *Conference on Complex Systems (CCS)* held on September 28-October 02 at Tempe, Arizona, USA.
10. **Ishtiaque, A.\*** (2012) How rural-urban migration contributes to the development of a mega city: A case from Bangladesh, *Proceeding at International Congress on Social & Cultural Studies* at Port Harcourt, Nigeria, September 4-8, pp. 366-376.

### *Poster Presentations*

1. Ogunyila, A.\*, Gardezi, M., Michael, S., **Ishtiaque, A.**, May, C., Stock, R., and Vij, S. (2020) Prioritizing Climate Smart Agriculture (CSA): An organizational analysis, poster presented at the *SDSU Data Science Symposium* held on February 11-12 at Brookings, South Dakota, USA.
2. **Ishtiaque, A.\***, Chhetri, N., and Eakin, H. (2018) Structural analysis of multilevel adaptation governance network in Bangladesh, poster presented virtually at the *American Geophysical Union (AGU) Conference* online platform.
3. **Ishtiaque, A.** and Shrestha, M.\* (2018) Urbanization in the Himalayas?: Detecting loss of agricultural land due to urban growth in the Kathmandu valley, Nepal, poster presented at the *CAP-LTER 20<sup>th</sup> Annual All Scientists Meeting* held on January 5 at Tempe, Arizona, USA.

4. **Ishtiaque, A.\***, Nazem, N. I. and Jerin, T. (2015) Natural disaster induced losses at household level: A study on the disaster affected migrants, poster presented at *American Geophysical Union (AGU) Conference* held on December 14-18 at San Francisco, California, USA.
5. Jerin, T.\* and **Ishtiaque, A.** (2015) Groundwater Depletion in Dhaka City, Bangladesh: A spatio-temporal analysis, poster presented at *American Geophysical Union (AGU) Conference* held on December 14-18 at San Francisco, California, USA.

## OUTREACH

1. **Ishtiaque, A.**, (2020, July 21) Empower BWDB for effective flood management. *New Age*.  
<https://www.newagebd.net/article/111654/empower-bwdb-for-effective-flood-management>

## SKILLS

Geospatial Analysis: ArcGIS, R, Python, GeoDa, GWR, Google Earth Engine, ERDAS Imagine.  
Statistics: R, IBM SPSS.

Social Network Analysis: R, UCINET, Gephi.

Multi-Criteria Decision Analysis: Super Decision.

Qualitative Data Analysis: Atlas.ti

Others: MS Office (Word, Excel, PowerPoint), Netlogo agent based programming (basic), Inkscape.

Social Survey: Household and Organizational survey, Key-informant interview, Focus group discussion.

Language: Bangla (native), English (proficient), Hindi (advanced, speaking & listening), French (beginner).

[GITHUB PROFILE](#)

## AWARDS

- Travel Award 2022: University of Michigan Postdoctoral Association
- Professional Development Award 2021: University of Michigan Postdoctoral Association
- ASU College of Liberal Arts & Science Graduate Excellence Award 2018.
- Jeanne X. Kasperson Student Paper Award, AAG Hazards, Risks & Disasters Specialty Group (AAG 2018)
- Matthew G. Bailey Fellowship, Arizona State University 2016
- Travel Award 2019: ASU Graduate Professional Student Association
- Travel Award 2018: ASU Graduate Professional Student Association
- Travel Award 2017: ASU Graduate Professional Student Association
- Travel Award 2016: ASU Graduate Professional Student Association
- Bangladesh-Sweden Trust Fund Travel Award 2015
- Dhaka University Merit Grant 2011

## DEPARTMENTAL SERVICES

- Member: Graduate Admission and Recruiting Committee (2022-23)
- Member: CNAS Student Scholarship Committee (2022-23)
- Member: Geography, Planning and Geospatial Science Scholarship Committee (2022-23)

## PROFESSIONAL SERVICES

- Special Issue Editor, *Frontiers in Political Science* (Topic: Politics of the Possible: In Search of Multi-Scalar Climate Solutions)
- Reviewer of the IPCC Sixth Assessment Report to be published in 2022 (First-order draft).
- Session Chair at AAG 2017.
- Research Grant Reviewer: ASU Graduate Professional Student Association.
- Travel Grant Reviewer: ASU Graduate Professional Student Association.
- General Secretary at Bangladesh Student Association, Arizona State University.
- Founding General Secretary at the *Environment Club*, Department of Geography & Environment, University of Dhaka, Bangladesh.
- Organizer of the UN-WOMEN activism against Gender Violence.
- Reviewer of Journals:
  - *Agroecology & Sustainable Food Systems*
  - *Annals of the American Association of Geographers*
  - *Applied Geography*
  - *Climate Policy*
  - *Climate Risk Management*
  - *Earth Systems and Environment*
  - *Ecology & Society*
  - *Environment, Development and Sustainability*
  - *Environmental Challenges*
  - *Environmental Development*
  - *Environmental Research Letters*
  - *Environmental Science & Policy*
  - *Forest Ecology and Management*
  - *Frontiers in Political Science*
  - *GeoJournal*
  - *Helvion*
  - *Hydrological Sciences*
  - *International Journal of Disaster Risk Reduction*
  - *ISPRS International Journal of Geo-Information*
  - *Journal of Environmental Management*
  - *Journal of Environmental Planning and Management*
  - *Land*
  - *Oxford Open Climate Change*
  - *PLOS One*
  - *Remote Sensing*

- *Remote Sensing in Earth System Sciences*
- *Science of the Total Environment*
- *Scientific Reports*
- *Sustainability*
- *The Professional Geographer*
- *World Development*