

# Dr. Sarvarbek Eltazarov



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## Education

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**Martin Luther University of Halle-Wittenberg | Halle (Saale), Germany**  
Doctor of Philosophy (PhD) in Agricultural Science | 04/2018 - 12/2023

**Wageningen University | Wageningen, The Netherlands**  
Master of Science (MSc) in Environmental Science | 07/2014 - 08/2016

**Tashkent Institute of Irrigation and Melioration | Tashkent, Uzbekistan**  
Bachelor of Science (BSc) in Farm Engineering Systems | 09/2009 - 06/2013

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## Experience

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**Leibniz Institute of Agricultural Development in Transition Economies (IAMO) | Halle (Saale), Germany**  
Research Associate | 04/2018 - Present

- Conduct extensive research on natural/climate risk and vulnerability assessment of agricultural producers using ground and satellite-based remote sensing data.
- Design and analyze the performance of various satellite-based index insurance products (precipitation, soil moisture, evapotranspiration, temperature, vegetation indices, etc.)
- Perform statistical analysis as well as program statistical packages and web applications using R, Python, and JavaScript (Google Earth Engine) for satellite-based data, agricultural and economic analyses.
- Contribute to the development of peer-review publications, reports and project proposals.

**International Water Management Institute (IWMI) | Tashkent, Uzbekistan**  
Regional Consultant: GIS, Remote Sensing and Climate Change | 06/2016 - 05/2018

- Developed and maintained geospatial databases to support various projects in Central Asian countries
- Processed, analyzed, and interpreted geospatial/remote sensing data to create maps and reports on variations of land cover/use and vegetation cover
- Designed and conducted multiple capacity-building activities on the application of remote sensing data in climate studies including land and water management
- Assisted in the development of project reports and project proposals as well as submissions for funding

**German-Kazakh University (DKU) | Almaty, Kazakhstan**  
Consultant: Trainer on Climate and Remote Sensing Data | 08/2017 - 09/2017

- Designed and conducted training modules on the application of remote sensing techniques on terrain and watershed analysis
- Supervised graduate students on land and water management projects

**German Agency for International Cooperation (GIZ) | Tashkent, Uzbekistan**  
Consultant: Moderator and Trainer | 07/2017 - 09/2017

- Designed and conducted training modules on Basics of GIS in formulation of state water cadastre and hydro-technical constructions
- Developed and conducted pre and post-training surveys

**State Scientific Research Institute of Soil Science and Agro-Chemistry | Tashkent, Uzbekistan**  
Research Internship | 05/2014 - 08/2014

- Collected soil samples from fields and analyzed soil salinity and texture in the laboratory
- Designed maps based on EC meter measurements and laboratory analysis
- Prepared project assessment reports, concept notes, and workshop materials

## Tashkent Institute of Irrigation and Melioration (TIIM) | Tashkent, Uzbekistan

Ecological Engineer | 02/2014 - 08/2014

- Performed laboratory analysis of soil and water samples
- Conducted soil salinity measurements using EC meter in fields and laboratory
- Performed spatial analysis of field and laboratory results and designed maps

## Publications

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### Peer-review publications:

- **Eltazarov, S.**, Bobojonov, I., Kuhn, L., Glauben, T. (2023). Improving risk reduction potential of weather index insurance by spatially downscaling gridded climate data - a machine learning approach. Big Earth Data. <https://doi.org/10.1080/20964471.2023.2196830>
- **Eltazarov, S.**, Bobojonov, I., Kuhn, L., Glauben, T. (2023). The role of crop classification in detecting wheat yield variation for index-based agricultural insurance in arid and semi-arid environments. Environmental and Sustainability Indicators, 18, 100250. <https://doi.org/10.1016/j.indic.2023.100250>
- **Eltazarov, S.**, Bobojonov, I., Kuhn, L., Glauben, T. (2021). Mapping weather risk – A multi-indicator analysis of satellite-based weather data for agricultural index insurance development in semi-arid and arid zones of Central Asia. Climate Services, 23, 100251. <https://doi.org/10.1016/j.cliser.2021.100251>

### Non-review publications:

- Bobojonov, I., Kuhn, L., Moritz, L., **Eltazarov, S.**, Glauben, T. (2019). Risk management tested in a realistic simulation. Improving climate resilience through agricultural insurance - the KLIMALEZ project, IAMO Annual 2019. Halle, Germany.
- Gafurov, Z., **Eltazarov, S.**, Akramov, B., Djumaboev, K., Anarbekov, O., Solieva, U. (2018). Geodatabase and diagnostic atlas: Kashkadarya province, Uzbekistan. Colombo, Sri Lanka: International Water Management Institute (IWMI). 74p. <https://doi.org/10.5337/2018.217>
- Gafurov, Z., **Eltazarov, S.** (2017). Digital Diagnostic Atlas: Murgab River Basin. Colombo, Sri Lanka: International Water Management Institute (IWMI). 40p. <https://doi.org/10.5337/2017.219>

## Languages

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English (Proficient), Russian (Proficient), Uzbek (Native), Turkish (Intermediate), German (Beginner)

## Skills

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**Technical skills:** Google Earth Engine (GEE), R, Python, JavaScript, QGIS, ArcGIS, Power BI, STATA, ERDAS, ArcSWAT, InVEST, Endnote, Mendeley, MS Office, etc.

**Personal skills:** Research and analysis, data analysis, project coordination and management, cross-functional team collaboration, presentation and reporting, problem-solving, communication and interpersonal skills

## Coauthored mobile and web applications

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- FarmPulse, <https://play.google.com/store/apps/details?id=com.companyname.FarmPulse>
- Vegetation and Weather Data Extractor (VEWEX), <https://klimalez.org/satellite-indices>
- KlimALEZ Toolbox, <https://www.klimalez.org/climate-insurance/>
- Satellite Weather Data Extractor (SATWEX), <https://www.klimalez.org/satwex>

## Awards

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- Erasmus Mundus CASIA Scholarship for Master Studies (Full-Ride, 2013-2016)
- Uzbek State Scholarship for Bachelor Studies (Full-Ride, 2009-2013)

## Volunteering

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Manager | 04/2022 - Present | Central Asia Geospatial Community (CAGC), LinkedIn

- Develop and execute a strategy for growing and engaging the community as well as identify and engage with influencers and thought leaders in the industry to increase visibility and reach

Ph.D. Council | 04/2020 - 07/2021 | Leibniz Institute of Agricultural Development in Transition Economies (IAMO), Germany

- Represented the interests of doctoral researchers at IAMO. The goals were to strengthen the rights and opportunities of doctoral researchers at the Institute and foster exchange among PhD candidates.