

Simir Birihan Atanaw

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Profile Summary

Hydrologist and water resource researcher with experience in university teaching, research, and management of international water projects. Skilled in supervising BSc and MSc research, delivering hydrological modelling for soil erosion, surface and groundwater interaction, flood and drought analysis, and supporting evidence-based catchment management. Has strong technical and analytical capabilities, alongside effective communication and stakeholder engagement skills.

Key Achievements

- Supervised MSc **theses** and BSc **project work** to successful completion
- Managed international project sustainable **water resource management** under **pressure (SWAMP)**
- Published **peer-reviewed articles** in hydrology, modelling and water resources
- Developed **two MSc curricula** and revised a BSc curriculum in hydrology and water resources
- Established an **experimental catchment** for field based hydrological monitoring

Role & Research Interests

Target roles such as Hydrologist, Hydrogeologist, Flood & Drought Risk Analyst, Catchment manager, and Water Resources Project management within the UK. Interests include applied hydrology, particularly surface & groundwater modelling, flood and drought risk assessment, and climate change impact analysis. Strong focus on delivering practical research-based solutions for water resource planning and catchment management.

Professional Experience

ICQA associate- Amazon BRS2, Swindon UK | Apr-2026 – Now

- Responsible to Simple Bin Count (SBC), Cycle Count (CC), and Simple Record Count (SRC)

Relocation August 2025- Mar 2026

- Moved from Ethiopia to the UK and reestablished career foundations.

Assistant Professor - Hydrology & Water Resources Management

University of Gondar, Ethiopia | Feb 2025 - Aug 2025

- Developed two MSc programmes and revised BSc curriculum in hydrology and water resources
- Providing teaching on hydroclimatology, watershed management, and field hydrology
- Supervised MSc research theses in hydrological modelling, improving the accuracy of the students' skill and producing publishable results
- Designed course materials, laboratory sessions, and practical field training
- Established an experimental catchment for long term hydrological monitoring

Project manager - Sustainable Water Resources Management Under Pressure (SWAMP)| 2024-2025

- Managed a multidisciplinary team on an international water management project
- Coordinated field data collection, modelling tasks, stakeholder engagement, and reporting
- Delivered project outputs supporting catchment scale water resource planning

Ph.D. Study Period | 2019-2025

- Study Doctor of Philosophy in water resource management in Africa centre of excellence for water management, at Addis Ababa University

Lecturer - Hydraulic & Water Resources Engineering | 2017-2019

- Delivered undergraduate teaching in surface water, groundwater, and water resources systems planning
- Provided technical training in hydrological modelling and GIS applications

Assistant Lecturer - Water Resources & Irrigation Management | 2015-2017

- Delivered tutorials in farm machinery, hydrometry, and laboratory analysis
- Delivered fieldwork and student research projects

Education

PhD - Hydrology & Water Resources Management

Africa Centre of Excellence for Water Management (ACEWM), Addis Ababa University | 2019-2025

Thesis: *Modelling spatial patterns of runoff-generating areas and soil erosion in the Dirima Watershed, Lake Tana Basin using SWAT+ model.*

MSc - Engineering Hydrology

Bahir Dar Institute of Technology, Bahir Dar University | 2015-2017

Thesis: *Assessment of hydrological responses in treated and untreated catchments.*

BSc - Water Resources & Irrigation Management

Wollega University | 2011-2014

Thesis: *Evaluation of irrigation water demand for different vegetables using Cropwat 8.0.*

Selected Publications

1. Atanaw, S. B., Zimale, F. A., & Ayenew, T. (2024). *Assessment of erosion, sediment yield, and runoff generating areas in Dirima catchment, upper Blue Nile, Tana Basin, Ethiopia.* <https://doi.org/10.1007/s40899-024-01167-3>.
2. Atanaw, S. B., Zimale, F. A., Ayenew, T., & Ayele, G. T. (2023). Modeling future hydrological responses through parameter optimization and climate change scenarios in Dirima Watershed, Ethiopia. *Modeling Earth Systems and Environment*, 10(1), 1117–1135. <https://doi.org/10.1007/s40808-023-01817-z>.
3. Atanaw, S. B., Aynalem, D. W., Adem, A. A., Mekuria, W., & Tilahun, S. A. (2019). Effects of soil and water conservation practices on runoff, soil and nutrient losses in Alekt Wenz Watershed, Ethiopian Highland. *Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, LNICST*, 274, 170–182. https://doi.org/10.1007/978-3-030-15357-1_14.

Technical Skills

- **Hydrological Modelling:** SWAT+, HEC-HMS, calibration, validation, and uncertainty simulation
- **GIS & Remote Sensing:** ArcGIS, QGIS, and Google Earth Engine
- **Data Analysis:** R, Python, SPSS, Excel, statistical, and spatiotemporal modelling
- **Climate Impact Analysis:** Flood & drought, sediment, nutrient, and water-quality assessment
- **Field Hydrology:** Hydrometric measurements, laboratory analysis, and Environmental monitoring
- **Project Research:** Leadership, stakeholder engagement, reporting, and communication
- **Soft Skills:** Stakeholder engagement, teamwork, workshop & conference participation, and technical reporting

Certifications

- Nature Based Solutions for disaster and climate resilience (2025)
- Project Management in practice (2025)
- Research writing in the science and basics of grant writing (2022)
- Effective teaching training in University of Gondar (2016)
- PhD research stays for one month in Kiel University, Germany (2022 & 2024)
- Workshops in Kiel University Germany (2023 & 2025) for 15 days each year
- ICAST conference participation (2018)

Professional Membership

- British Hydrological Society (BHS)
- International Association of Hydrological Sciences (IAHS)
- International Water Resources Association (IWRA)
- Ethiopia Water Resources Professionals Association (WRPA) (joint founder)

Additional Information

- Full right to work in the UK (no sponsorship required).
- Open to relocation anywhere in the UK for the right opportunity.
- Available to travel as required.

References

1. Prof. Seifu A. Tilahun (Prof.) MSc. thesis Supervisor and teacher:
Senior Researcher-Hydrology and WR at International Water Management Institute
Email: satadm86@gmail.com
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2. Dr. Fasikaw Atanaw (Associate Professor) teacher and PhD Supervisor:
Bahir Dar institute of technology PhD programs coordinator, and V/dean School of Graduate Studies
Email: fasikaw@gmail.com
phone: +251 91 870 1064
3. Prof. Dr. Nicola Forher (SWAMP project leader):
Director of the Institute of Natural Resource Conservation, Department of Hydrology and Water Resources
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