

# Kibrewosen Zewdu **Belay**

## Remote Sensing and Hydrology Expert

Date of Birth: 19 June 1992

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## Summary

A detail-oriented water professional with a Master's in Hydroinformatics and over 4 years of effective hands-on experience in Remote Sensing, Hydrology, and Sustainable Water Resources Management. Specializing in water systems optimization and the development of decision support tools.

Extensive experience in leading platform development and capacity building projects in multicultural project environment for the benefit of communities in Sub-Saharan Africa and the Middle East.

## Education

### 2017-2019 IHE DELFT INSTITUTE FOR WATER EDUCATION

MSC, HYDROINFORMATICS

RESEARCH AREA: Water Resources Management: Water System Optimization

THESIS: Optimization of Transboundary reservoir system in the Nile basin: The Tekeze - Atbara case study

### 2009-2014 ARBAMINCH UNIVERSITY

BSC, HYDRAULIC AND WATER RESOURCES ENGINEERING

RESEARCH AREA: Hydrologic Modeling

THESIS: Bedessa watershed Rainfall-Runoff Modelling using HEC-HMS

## Work Experience

### JAN2023-CURRENT REMOTE SENSING AND HYDROLOGY EXPERT [FULL TIME]



**Project lead** for Developing the River Basin Monitoring System for Tigris and Euphrates Rivers in Iraq

**Responsibilities:** Provide technical support, Oversee platform development, GIS training design and delivery

### JUL2014-JAN2023 LECTURER AND RESEARCHER IN HYDROINFORMATICS [FULL TIME]



University of Gondar  
Institute of Technology, Gondar, Ethiopia

**Lecturer** under the Department of Hydraulic and Water Resources Engineering

**Responsibilities:** Lecturing undergraduate courses, Teaching assistance for post-graduate classes, Research and community service

### JAN2022-JAN2023 GIS EXPERT [PART TIME]



ABEK Business Group  
Water Consultancy, Gondar, Ethiopia

**Project :** Soil Survey and Land Suitability Evaluation Consultancy Service for Adaa and Becho Groundwater Irrigation Development and Rural Development Project

**Responsibilities:** Geospatial data processing, Analysis and Visualization/Map making

### MAY2022-JAN2023 DEREJA ACADEMY ACCELERATOR PROGRAM (DAAP) TRAINING FACILITATOR [PART TIME]



Dereja.com  
InfoMind Solutions, Addis Ababa, Ethiopia

**Training facilitator** for young fresh graduates on self-development and employability skill training

**Responsibilities:** Facilitating training for 8 consecutive weeks, Follow up and weekly reporting

## Volunteering

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JUL 2022-CURRENT AMHARIC TRANSLATOR [PART TIME]



<https://onewater.blue/>

**Responsibilities:** Translating articles to Amharic for better outreach

## Teaching Experience

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2014- 2019 UNDERGRADUATE: CIVIL AND WATER ENGINEERING

**Courses on Basic Hydraulics:** Open channel water systems, Hydraulic Structures

**Software demonstrations:** GIS & Remote Sensing, Software Applications in Hydraulic Engineering

**Research/Mentorship:** Irrigation and Hydropower Project development final year projects

**Laboratory demonstrations:** Properties of fluid and hydrostatics experiments

2019- 2023 POSTGRADUATE: HYDRAULIC ENGINEERING

**Teaching assistant for Msc. courses :** GIS for water management, computer programming applications in Numerical methods and Computational Hydraulics

**Training in programming:** Msc. Students on application of python in computational hydraulics

**Research/Mentorship:** Conducted research on Roof-top water harvesting, Groundwater potential mapping, water potential assessment Co-advised two Msc. Students in topics of hydrological modelling and remote sensing

**Online teaching:** [www.youtube.com/@KibrewosenBelay](https://www.youtube.com/@KibrewosenBelay)

## Research Interest

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**Water resources planning and management (WRPLM):** Machine Learning-Based Web Framework for Enhanced Hydrological Predictions [Emphasis on application for water management decision support tool development]

## Honors & Awards

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**2022 Orange Knowledge Program (OKP) scholarship:** Linking good land and water governance for lasting food security [Refresher course organized by IHS, Institute for Housing and Urban Development Studies, Rotterdam, Netherlands]

**2021 Orange Knowledge Program (OKP) scholarship:** Towards sustainable food security [Refresher course organized by IHS, Institute for Housing and Urban Development Studies, Rotterdam, Netherlands]

**2017 Netherlands Fellowship Program (NFP):** Full scholarship to attend Msc in Hydroinformatics

## Publication

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### CONFERENCES AND WORKSHOPS

**2019** Tekeze-Atbara basin regional conference on water related studies [Organized by The hydraulics research center Sudan (HRC-Sudan), 24- 25/03/2019]

**2022** Water Resources under pressure: Challenges and future perspectives for Ethiopian water bodies [Organized by University of Kiel (CAU-Germany), 03- 04/11/2022]

### RESEARCH PROJECTS

**2020** Mapping Geotechnical properties of Gondar City Soil [Fully funded research by University of Gondar, 11/10/2020-20/06/2021]

**2022** Soil Survey and Land Suitability Evaluation Consultancy Service for Adaa and Becho Groundwater Irrigation Development and Rural Development Project[Funded by Ethiopian Ministry of low land and irrigation, 01/01-30/10/2022]

## Certifications

<b>APR 2023</b>	Cartography. ESRI
<b>MAR 2023</b>	HEAT & First Aid SENTRY SECURITY
<b>NOV 2022</b>	Spatial Data Science: The New Frontier in Analytics. ESRI
<b>JUN 2022</b>	Using Python for Research. edX
<b>MAY 2022</b>	Dereja Academy Accelerator Program Training of Trainers. Dereja.com
<b>MAY 2022</b>	Going Places with Spatial Analysis. ESRI
<b>MAY 2022</b>	Python Basics for Data Science. edX
<b>MAY 2022</b>	AI for Everyone: Master the Basics. edX
<b>MAY 2022</b>	Introduction to Data Science. edX
<b>MAR 2022</b>	Disrupting HydroInformatics. World Bank Group
<b>FEB 2022</b>	Linking good land and water governance for lasting food security. Institute for Housing and Urban Development Studies, Erasmus University Rotterdam
<b>JUN 2021</b>	Towards sustainable food security. Institute for Housing and Urban Development Studies, Erasmus University Rotterdam
<b>JUN 2018</b>	Water professionals-IHE modelling lecture series. South Florida Water Management District, U.S.A



[https://drive.google.com/file/](https://drive.google.com/file/d/1NDKKLJAy51s3c2B6GCdYcUFnqsGM1Nfu/view?usp=sharing)

[d/1NDKKLJAy51s3c2B6GCdYcUFnqsGM1Nfu/view?usp=sharing](https://drive.google.com/file/d/1NDKKLJAy51s3c2B6GCdYcUFnqsGM1Nfu/view?usp=sharing)

## Skills

### LANGUAGE SKILLS

**MOTHER TONGUE:** Amharic

**OTHER LANGUAGE:** English. IELTS Proficiency **C1**

### WATER RESOURCES MODELLING TOOLS: ADVANCED PROFICIENCY

Python programming, C# programming, / MIKHYDROBasin, MIKE SHE / HEC-HMS, HEC-RAS, HECResSim / QSWAT, ArcGISPro, QGIS / Mullino (multi-criteria analysis), RIBASIM

### WATER RESOURCES MODELLING TOOLS: HIGH PROFICIENCY

SQL programming / SOBEK / MODFLOW / WaterGEMS / AUTOCAD / MIKEHYDRORiver, MIKE URBAN

### WATER RESOURCES MODELLING TOOLS: MEDIUM PROFICIENCY

EPANET / WEKA (Machine learning) / DrinC (Drought management)

## References

**Dima Hunati**  
iMMAP Iraq  
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Academic diploma and IELTS result can be accessed here



[https://drive.google.com/file/](https://drive.google.com/file/d/1HvnAVL2wmq1FKzmtBp2Lr5rTcE8nodU3/view?usp=sharing)

[d/1HvnAVL2wmq1FKzmtBp2Lr5rTcE8nodU3/view?usp=sharing](https://drive.google.com/file/d/1HvnAVL2wmq1FKzmtBp2Lr5rTcE8nodU3/view?usp=sharing)