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Male, Married.
Addis Ababa,
Ethiopia.

Experienced Water Quality Expert, Water and Coastal Manager , WASH expert

Water Quality Analysis & Monitoring

**Develop Adaptive Environmental
Management frameworks**

**Supervise PhD students
Deliver courses to PG students**

Summary

Water quality expert with more than 20 years of experience in water quality monitoring and surveillance. Well-versed in physico-chemical and bacteriological analysis of water. Coordinated fluoride mitigation project, led water quality monitoring system establishment and actively involved in water quality mapping. Conducted research on bacteriological, limnological and physico-chemical aspects of surface water sources (Rift valley lakes and Awash River). Involved in emergency water supply for communities affected by Acute Watery Diarrhea and conducted water quality assessment in the World Banks WASH program. Supervises PhD students and delivers courses to post-graduate students in Water and Health. A qualified Water and Coastal Management expert. Involved in European Research projects on coastal and Marine Issues.

Areas of expertise

- Water Quality Management
- Water Management
- Marine/Coastal Management
- Drinking water treatment
- Environmental assessment
- Developing adaptive environmental Management frameworks
- Developing social-ecological system (SES) assessment tools

Professional Experience

Ethiopian Institute of Water Resources (EIWR), Addis Ababa University: 2016-Present

- Supervise PhD and MSc students
- Deliver courses to PG students
- Involvement in the formation of African center of excellence for Water Management

Associate Professor in Water and health:

2021(July)-Present

Assistant Professor in Water and Health

2016 - 2021 (June)

Universidad de Cadiz, Puerto real, Spain:

2012-2015

PhD research Fellow

- Developed SES analytical tool
- Published papers

Oromia Water Minerals and Energy Bureau (OWMEB) , Ethiopia: 1990-2012

- Bacteriological and Physico-chemical analysis of water
- Sanitary inspection and disinfection of water sources
- Training zonal water quality control personnel on water quality monitoring activities

- Water Quality Assessment with World Bank's WASH program
- Conducting research on bacteriological, biological and physico-chemical aspects of surface water sources (Rift valley lakes and Awash river).
- Awareness creation activities on the Public on safe handling and use of water sources and water
- Fluoride mitigation activities in the rift valley zone of the Oromia region.
- Water Quality Mapping
- Emergency water supply for communities affected by Acute Watery Diarrhea

Research and teaching experience

❖ Research

- Water Quality Assessment of Rift valley lakes
- Awash River Pollution load Assessment
- Preliminary survey of the Akaki River Pollution
- Water Quality Monitoring System Establishment
- Fluorosis assessment and Eradication
- Water Quality Mapping
- Determination of light attenuating factors in lakes
- Testing the Application of SAF in the Ria Formosa
- Development of adaptive environmental management tools

❖ Teaching

- **PhD courses in Water and Health Seminars**
- **MSc courses**
 - ✓ Water and coastal Management
 - ✓ Eco hydrology
 - ✓ Water Quality management
 - ✓ Environmental pollutants
 - ✓ Water and Public health

Education and Training

Education

- 1. Consortium of Universidad de Cadiz, Spain and Universidade do Algarve, Portugal**
 - **PhD** in Marine and Coastal Management, (European Joint Doctorate): **2012-2015**
- 2. Consortium of University of Plymouth, UK, Universidad de Cadiz, Spain and Universidade do Algarve, Portugal**
 - **MSc** in Water and Coastal Management (European Joint Masters): **2008-2010**
- 3. UNESCO-IHE, Netherlands**
 - **MSc** in Env. Science (Specialization: Water Quality Management): **2003-2005**
- 4. Addis Ababa University, Ethiopia**
 - **BSc** in Biology (Minor: Chemistry): **1983-1990**

Training

- **Online course:** Disaster and Ecosystems: Resilience in a changing climate.
- **DEVOTES Summer school:** Integrative assessment of marine systems: the Ecosystem Approach in practice June 9-11, **2015**, San Sebastian, Spain.
- **Regional refresher seminar** on Decision Support Systems in River Basin Management, November 6 -16, **2011**, Nile Basin Initiative, Addis Ababa, Ethiopia.
- **Instrumental Applications in Water Analysis**, June 4-7, **2001**, Shriram Institute for Water Research, Delhi, India.

Honors and Recognitions

❖ Grants and fellowships

- **EMJ Doctoral fellowship:** 2012-2015
- **EMJ Masters fellowship:** 2008-2010
- **EAWAG fellowship:** 2004-2005
- **NFP fellowship:** 2003-2004

❖ Project funding

- **UNICEF** for fluorosis mitigation: 1999-2004
- **UNDP** for Water Quality Monitoring: 1997-2002

Academic Services

▪ Manuscript review for the following Journals:

- Aquatic Ecology
 - Coastal conservation
 - Earth Surface Process and Land forms
 - Ecological Indicators
 - Environmental Engineering and Management
 - Environmental Monitoring and Assessment
 - Environmental Processes
 - Environmental Research and Public Health
 - Environmental Science and Pollution Research
 - Frontiers in Ecology and Evolution
 - Geography and Sustainability
 - Integrated Coastal Zone Management
 - International Journal of Environmental Research and Public health
 - International Journal of Environmental Research and Public health
 - Journal of American Water Resources Association
 - Journal of Coastal Conservation
 - Journal of Environmental Planning and Management
 - Journal of Natural Resources and Development
 - Land Use Policy
 - Marine Policy
 - Regional Studies in Marine Science
 - Resources, Conservation and Recycling
 - Sustainability
 - Urban Waters
 - Water
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Interests and skills

❖ Research Interest

- Water and Coastal Management and Policy
- Water Quality management
- Water Resources management and Planning
- Environmental Management
- Aquatic ecology and Limnology

❖ Teaching Interest

- Water Quality management
- Water Supply and sanitation
- Water Treatment
- Aquatic ecology and Limnology
- Environmental Pollutants

❖ Language skill

- Amharic (Native)
- English (fluent)
- French (Intermediate)
- Spanish (Intermediate)
- Italian (intermediate)
- German (basic),
- Russian (basic)

❖ Other Skills

- MS office and different softwares
- Literary skills (Amharic and English short stories and novel)

❖ Professional associations: Member:

- American Water Resources Association (AWRA-Florida)
- Center for Environmental and Marine Research (CIMA)
- Clean Air & Water
- Water Professionals
- Global Lakes Ecological Observatory Network (GLEON)
- Water, Coast and Marine Network of Researchers and Managers (wacoma.net)

❖ **References:** Professor Alice Newton; Dr John D Icely, Professor Maria del Mar Delgado-Serrano; Dr Cesar E. Ortiz-Guerrero

❖ Publications

1. Ali, A.S., Ambelu, A., **Gari, S.R. (2022)**. Meta-analysis of public health risks of lead accumulation in wastewater, irrigated soil, and crops nexus. *Front. Public Health*. <https://doi.org/10.3389/fpubh.2022.977721>.
2. Dessie, B.K., Mehari, B., Tefera, M., Osman, M., Tsegaye, Y., **Gari, S.R.**, Desta, A.F., Melaku, S., Alamirew, T., Goodson, M.L., Walsh, C.L., Zeleke, G., Mihret, A. (2022). Urinary 8-OHdG level is not affected by geography and trace elements in nail of residents of Addis Ababa: It is shaped by interactions between different social factors. *Toxicology Reports* 9 (2022) 1777–1787. <https://doi.org/10.1016/j.toxrep.2022.09.006>
3. Gemedo, S.T., Soboksa, N.S., Tefera, Y.M., Desta, A.F., **Gari, S.R. (2022)**. “PCR-Based Detection of Pathogens in Improved Water Sources: A Scoping Review Protocol of the Evidence in Low-Income and Middle-Income Countries.” *BMJ Open* 12 (5): e057154. <https://doi.org/10.1136/bmjopen-2021-057154>.
4. Tafess, N., Porcelli, M., **Gari, S.R.**, Ambelu, A. (2022). “Drinking Water Source, Chlorinated Water, and Colorectal Cancer: A Matched Case-Control Study in Ethiopia.” *Environmental Health Insights* 16 (January). <https://doi.org/10.1177/11786302211064432>.

5. Gemedda, S.T., Desta,A.F., **Gari, S.R.**, Jass,J.,Woldemedhin,W.W., Haileyesus.M.N. (2022). “Enterotoxins as a Molecular Marker of Water Quality.” *Water Practice and Technology* 17 (2): 623–36. <https://doi.org/10.2166/wpt.2022.016>.
6. Dessie, B.K., Mehari, B. , **Gari, S.R.**, Mihret,A., Desta,A.F., Melaku,S., Alamirew,T., Claire L. Walsh,C.L., Werner,D., Zeleke , G. (2022) “Trace Element Levels in Nails of Residents of Addis Ababa Are Shaped by Social Factors and Geography.” *Biological Trace Element Research*. <https://doi.org/10.1007/s12011-022-03181-y>.
7. Dessie, B K., **Gari,S.R.**, Adane Mihret, Adey F. Desta, and Bewketu Mehari. (2021). “Determination and Health Risk Assessment of Trace Elements in the Tap Water of Two Sub-Cities of Addis Ababa, Ethiopia.” *Heliyon* 7 (5). <https://doi.org/10.1016/j.heliyon.2021.e06988>.
8. Gemedda, S.T., Springer,E., **Gari, S.R.**, Melake Birhan,S., Bedane,H.T.(2021). “The Importance of Water Quality in Classifying Basic Water Services: The Case of Ethiopia, SDG6.1, and Safe Drinking Water.” *PLoS ONE* 16 (8 August). <https://doi.org/10.1371/journal.pone.0248944>.
9. Soboksa, N. E., **Gari,S,R**, Hailu,A.B., Alemu,B.M. (2021). Child Defecation, Feces Disposal Practices and Associated Factors in Community-Led Total Sanitation Adopted Districts in Jimma Zone, Ethiopia.” *Environmental Challenges* 3 (April). <https://doi.org/10.1016/j.envc.2021.100059>.
10. Soboksa, N. E., **Gari,S,R**, Hailu,A.B., Alemu,B.M. (2021). “Childhood Malnutrition and the Association with Diarrhea, Water Supply, Sanitation, and Hygiene Practices in Kersa and Omo Nada Districts of Jimma Zone, Ethiopia.” *Environmental Health Insights* 15. <https://doi.org/10.1177/1178630221999635>.
11. Soboksa, N. E., **Gari,S,R**, Hailu,A.B., Donacho, D.O., Alemu,B.M. (2020). “The Effectiveness of Solar Disinfection Water Treatment Method for Reducing Childhood Diarrhea: A Systematic Review and Meta- Analysis Protocol.” *Systematic Reviews* 9 (1). <https://doi.org/10.1186/s13643-020-01288-8>.
12. Soboksa, N. E., **Gari,S,R**, Hailu,A.B., Alemu,B.M. (2020). “Association between Microbial Water Quality, Sanitation and Hygiene Practices and Childhood Diarrhea in Kersa and Omo Nada Districts of Jimma Zone, Ethiopia.” *PLoS ONE* 15 (2). <https://doi.org/10.1371/journal.pone.0229303>.
13. Solomon, E. T., **Gari,S,R**, Kloos,H., Alemu,B.M. (2021). Handwashing effect on diarrheal incidence in children under 5 years old in rural eastern Ethiopia: a cluster randomized controlled trial. *Tropical Medicine and Health* 49(1). DOI: 10.1186/s41182-021-00315-1
14. Girmay, A.M., **Gari, S.R.**, Alemu,B.M., Evans,M.R., Gebremariam,A.G., (2021). Trichotomy of awareness, outlook and practice of food handlers towards food and water safety in food establishments in Addis Ababa, Ethiopia. *AIMS Public Health*, 7(2): 241–257. DOI: 10.3934/publichealth.2020021.
15. Girmay, A.M., **Gari,S,R**, Alemu,B.M., Evans,M.R., Gebremariam,A.G. (2020). Diarrheal disease and associated behavioural factors among food handlers in Addis Ababa, Ethiopia. *AIMS Public Health*, 7(1): 100–113. DOI: 10.3934/publichealth.2020010.
16. Solomon, E. T., **Gari,S,R**, Kloos,H., Alemu,B.M. (2020). “Diarrheal Morbidity and Predisposing Factors among Children under 5 Years of Age in Rural East Ethiopia.” *Tropical Medicine and Health* 48 (1). <https://doi.org/10.1186/s41182-020-00253-4>.
17. Solomon, E. T., **Gari,S,R**, Kloos,H., Alemu,B.M. (2020). “Effect of Household Water Treatment with Chlorine on Diarrhea among Children under the Age of Five Years in Rural Areas of Dire Dawa, Eastern Ethiopia: A Cluster Randomized Controlled Trial.” *Infectious Diseases of Poverty* 9 (1). <https://doi.org/10.1186/s40249-020-00680-9>.
18. Girmay, A.M., **Gari, S.R.**, Gebremariam,A.G., Alemu,B.M., Martin R. Evans,M.R., Gessew,G.T. (2020). “Longitudinal Study of Microbial Load of Drinking Water and Seasonal Variation of Water Quality at the Point of Use in Food Establishments of Addis Ababa, Ethiopia.” *Journal of*

19. Soboksa, N.E., Hailu, A.B., **Gari, S.R.**, Alemu, B.M. (2019). “Water Supply, Sanitation and Hygiene Interventions and Childhood Diarrhea in Kersa and Omo Nada Districts of Jimma Zone, Ethiopia: A Comparative Cross-Sectional Study.” *Journal of Health, Population and Nutrition* 38 (1). <https://doi.org/10.1186/s41043-019-0205-1>.
20. Malede, A., Aemero, M., **Gari, S.R.**, Kloos, H., Alemu, K. (2019). “Barriers of Persistent Long-Lasting Insecticidal Nets Utilization in Villages around Lake Tana, Northwest Ethiopia: A Qualitative Study.” *BMC Public Health* 19 (1). <https://doi.org/10.1186/s12889-019-7692-2>.
21. **Gari, S.R.**, Ortiz- Guerrero, C.E., A-Urbe, B., Icely, J.D., Newton, A. (2018). “A DPSIR-Analysis of Water Uses and Related Water Quality Issues in the Colombian Alto and Medio Dagua Community Council.” *Water Science* 32 (2): 318–37.
<https://doi.org/10.1016/j.wsj.2018.06.001>.
22. Malede, A., Alemu, K., Aemero, M., **Gari, S.R.**, Kloos, H. (2018). “Travel to Farms in the Lowlands and Inadequate Malaria Information Significantly Predict Malaria in Villages around Lake Tana, Northwest Ethiopia: A Matched Case-Control Study.” *Malaria Journal* 17 (1).
<https://doi.org/10.1186/s12936-018-2434-y>.
23. **Gari, S.R.**, Newton, A., Icely, J.D., Delgado-Serrano, M.M. (2017). “An Analysis of the Global Applicability of Ostrom’s Design Principles to Diagnose the Functionality of Common-Pool Resource Institutions.” *Sustainability (Switzerland)* 9 (7). <https://doi.org/10.3390/su9071287>.
24. **Gari, S.R.**, Newton, A., Icely, J. (2015) “A review of the application and evolution of the DPSIR framework with an emphasis on coastal social-ecological systems”. *Ocean & Coastal Management*, 103, p. 63-77. doi.org/10.1016/j.ocecoaman.2014.11.013.
25. Icely, J., **Gari, S.R.**, Ramos, P., Newton, A. (2015) ‘Sustainable Management and Governance Models’. Deliverable. Dissemination level: Public.
26. Smith, C., Papadopoulou, N., Barnard, S., Mazik, K., Patrício, J., Elliott, M., Solaun, O., Little, S., Borja, A., Bhatia, N., Moncheva, S., **Gari, S.R.**, Bizsel, C., Eronat, A.T. (2015). “Conceptual models for the effects of marine pressures on biodiversity”. Technical report. Dissemination level: Public.
27. **Gari, S.R.**, Newton, A., Icely, J., Lowe, C., (2014) “Testing the application of the Systems Approach Framework (SAF) for the management of eutrophication in the Ria Formosa”. *Marine Policy*, 43, p. 40-45. doi.org/10.1016/j.marpol.2013.03.017.

Presentations and participations

- Enhancing Policy Coherence for the SDGs through integrated climate, land, energy and water (CLEWs) assessments and institutional strengthening in Ethiopia. January 17, 2019. UNECA, Addis Ababa, Ethiopia.
- Regional Training Workshop on Effective Management of Water Quality and Emerging Pollutants in Water and Wastewater in Sub-Saharan Africa. September 27-28, 2018, Oak Plaza Hotel, Accra, Ghana.
- High level National Stakeholders Consultative Workshop on Climate Resilient WASH Program in Drought-Prone Ethiopia. October 5, 2017. Inter Bistro Hotel, Addis Ababa, Ethiopia.
- Oral presentation in the International Seminar on Rainwater Harvesting Techniques-Towards Effective Adaptation Strategies. September 26-28, Khartoum, Sudan.
- The 3rd Annual Ethiopia-Michigan Collaborative Consortium Conference. Ethiopian Futures: Moving Forward". July 11-14, 2017. The Horn of Africa Regional Environment Centre, Addis Ababa, Ethiopia.
- National Stakeholder Curriculum Review Workshop of Africa Centre of Excellence for Water Management (ACEWM). September 15, 2016, Desalegn Hotel, Addis Ababa, Ethiopia.

- Project kick-off and Technical Advisory Workshop of the Africa Centre of Excellence for Water Management. August 17-19, 2016, Desalegn Hotel, Addis Ababa, Ethiopia.
- Oral presentation in Conference WASH Futures 2016, Pathways to universal and sustained water, sanitation and hygiene Conference, May 16-20, 2016, Brisbane, Australia. Accepted.
- Poster presentation in The 2nd International interdisciplinary conference on agricultural land use and water quality, September 21-24, 2015, BOKU, Vienna, Austria. Accepted.
- Session chair in the YOUMARES conference, September 16-19, 2015. University of Bremen, Germany. Accepted
- Frame works for assessing Social-ecological systems (SES). WACOMA workshop, June 2014, University of Cadiz, Cadiz, Spain.
- Sustainability of Catchment-Coast Socio-Ecological Systems, MACOMA Workshop, April 01-05, 2013, Algarve, Portugal
- The use of DPSIR as a tool to assess Eutrophication Problems in the Ria Formosa. WACOMA workshop, March 2013, University of Algarve, Faro, Portugal. .
- Frame works for assessing Social-ecological systems (SES). WACOMA workshop, March 2013, University of Algarve, Faro, Portugal

Participation in projects.

- Hydro Economic Analysis for Ethiopia (HAE): 2020
- WATER and COoperation within the Nile River Basin (WACONI): 2017-2019.
- DEVELOPMENT Of innovative Tools for understanding marine biodiversity and assessing good Environmental Status (DEVOTES). 2012-2016.
- Community-based Management of Environmental Challenges in Latin America- (COMET-LA): 2012-2015.
- Science-Policy Integration for Coastal System Assessment (SPICOSA): 2007-2011.