

Dessalegn Obsi Gemedu (PhD)

PERSONAL INFORMATION

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Educational background

- Educational background: Bed in Geography and Environmental studies from Jimma University in 2008, MSc in Geographic Information Science and Remote Sensing from Wageningen University, The Netherlands in 2012, and PhD in Natural Resource Management (Specialization in Climate Change Adaptation and Mitigation) from Jimma University in January 2023.
- Research interest: land use land cover change, climate change adaptation and mitigation, climate smart agriculture, biodiversity conservation, ecotourism suitability evaluation and assessment, environmental impact assessment.

Short Biography

Dr. Dessalegn Obsi Gemedu is a professional in the field of geospatial technologies, environmental studies, and climate change. His work is mainly focused on the application of geospatial techniques in assessing and addressing environmental issues, particularly in Ethiopia. Land suitability evaluation, agricultural drought assessment, the impact of forest cover change on carbon stock and land surface temperature, and biodiversity conservation are some of the key areas of his research.

The author's also study about urban expansion and its impact on land use and land cover changes. They have conducted comprehensive analyses on urban heat island dynamics, urban green space suitability, and the correlation of forest and wetland with land surface temperature. In addition, the author has shown a keen interest in the study of climate change and its impacts. They have conducted research on the evidence of climate change in southwestern Ethiopia, the analysis of meteorological data trends, and the assessment of climate change adaptation strategies. Their work has had a significant impact on the understanding of environmental changes and challenges in Ethiopia, and their research findings have been widely cited. Moreover, the author is working with multi-stakeholders to enhance the conservation of biodiversity in southwestern part of Ethiopia.

List of publications

1. Gemedha, D.O., Kenea, G., Teshome, B., Daba, G.L., Argu, W., Roba, Z.R., 2024. Impact of Land Use and Land Cover Change on Land Surface Temperature: Comparative Studies in Four Cities in Southwestern Ethiopia. *Environmental Challenges*. 16, 101002. <https://doi.org/10.1016/j.envc.2024.101002>
2. Mohammednur, R.S., Deribew, K.T., Moisa, M.B., Gemedha, D.O., 2024. Landslide Susceptibility Zonation Mapping Using Geospatial Technologies and Multi Criteria Evaluation Techniques in Upper Didessa Sub-basin, Southwest Ethiopia. *Geology, Ecology, and Landscapes*. 1-15. <https://doi.org/10.1080/24749508.2024.2395205>.
3. Abafogi, M.A., Gemedha, D.O., 2024. Assessment of Extreme Climate Indices in the Somalia National Regional State, Eastern Ethiopia. *OAES-Cogent Sustainable Environment*. 10 (1), 2391130. <http://dx.doi.org/10.1080/27658511.2024.2391130>.
4. Dagne, S.S., Roba, Z.R., Moisa, M.B., Deribew, K.T., Gemedha, D.O., Hirpha, H.H., 2024. Rainfall prediction for a data scarce areas using metrological satellites the case of Lake Tana sub-basin, Ethiopia. *Journal of water & climate change*. 15 (5): 2188–2211.
5. Arega, E., Deribew, K.T., Moisa, M.B., Gemedha, D.O., 2024. Assessment of Soil Erosion and Prioritization of Conservation and Restoration Measures using RUSLE and Geospatial Techniques: The Case of Upper Bilate Watershed. *Geomatics, Natural Hazards and Risk*. 15 (1). <https://doi.org/10.1080/19475705.2024.2336016>
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8. Gutema, T.M., Mersha, A., Aticho, A., Gemedha, D.O., Diriba, S., Alemu, T., Gemechu, D., Habtamu, T., Tsegaye, D., Christian, N., 2023. Wildlife roadkill in Southwestern Ethiopia: hotspots, drivers, and victim species. *Heliyon*. 9, e19783. <https://doi.org/10.1016/j.heliyon.2023.e19783>.

9. Moisa, M.B., Gabissa, B.T., Wedajo, Y.N., Tamene, G.A., Gemedia, D.O., 2023. Forest and Wetland Versus Land Surface Temperature: A case of Yayo district, Southwestern Ethiopia. *Geocarto International*. <https://doi.org/10.1080/10106049.2023.2256300>
10. Gemedia, D.O., Kerebe, T.A., Gemechu, H.W., 2023. Land Cover Change and Public Perceptions Differently Affect Black Crowned Crane (*Balearica pavonina*) Conservation: Evidences from Jimma Zone Southwestern Ethiopia. *Environmental and Sustainability Indicators*. 19, 100288. <https://doi.org/10.1016/j.indic.2023.100288>.
11. Moisa, M.B., Gurmessa, M.M., Negasa, G.F., Oljira, D.G., Dinsa, M.L., Deribew, K.T., Roba, Z.R., Gemedia, D.O., 2023. Evaluation of the groundwater recharge potential zone by using GIS and remote sensing in the Ziway Abijata sub-basin, Central Rift Valley of Ethiopia. *Water Supply*. <https://doi.org/10.2166/ws.2023.183>.
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13. Moisa, M.B., Dejene, I.N., Deribew, K.T., Gurmessa, M.M., Gemedia, D.O. 2023. Impacts of Forest cover Change on Carbon Stock, Carbon Emission and Land Surface Temperature in Sor watershed, Baro Akobo basin, Western Ethiopia. *Journal of Water & Climate Change*. <https://doi.org/10.2166/wcc.2023.102>
14. Mekdes Shiferaw^{1,2}; Zerihun Kebebew¹; Dessalegn Obsi Gemedia¹ Impact of Forest Cover Change on Ecosystem Services in Central Highlands of Ethiopia: A Case of Wof-Washa Forest. *Heliyon*. <https://doi.org/10.1016/j.heliyon.2023.e18173>
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- models. Asia-Pacific Journal of Regional Science. <https://doi.org/10.1007/s41685-022-00248-5>
32. Moisa M.B; Hinkosa L.B; Gemedha D.O. (2022) Analysis of Land Surface Temperature using Geospatial Technologies in Gida Kiremu, Limu, and Amuru Districts, Western Ethiopia. Artificial Intelligence in Agriculture. 6:90-99.
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