

Academic Curriculum Vitae



Personal Information:

Name: Heman Abdulkhaleq Ahmed Gaznayee

Affiliation Address:

Forestry Department, College of Agriculture Engineering Sciences
Salahaddin University, Erbil, Kurdistan Region, Iraq

Permanent Home Address:

237/7/365, Street No.81, House No.18, Naz Naz, Erbil, Iraq

Email: heman.ahmed@su.edu.krd

Mobile: 009647504454367

:009647704454367



Education:

2016-2020 PhD. in Application of Remote sensing and GIS in Drought
Salahaddin University-Erbil, College of Agriculture Engineering Sciences

2005-2007 Master of Science (Master) in Plant Production, Salahaddin University-Erbil, College of Agriculture Engineering Sciences, Department of Plant production

2000– 2004- University of Salahaddin – College of Agriculture – Erbil– Iraq, BSc. in Plant production (2009, Erbil).

Modules includes: Ecology and climate, General Botany, Forestry, Plant Classification, Principle of soil, Prin. of Horticulture, Silviculture, Irrigation and Drawing, Plant physiology, Forest protection, silviculture, forest ecology and other modules.

Employment:

1. Agricultural Engineer
Environmental Protection Foundation in Kurdistan, Iraq (August 2004 - July 2006)
2. Assistant Lecturer
College of Agriculture Engineering Sciences, Salahaddin University (2006 - 2020)
3. PhD Lecturer
College of Agriculture Engineering Sciences, Salahaddin University (January 2020 - Present).
4. CEO CultiVision Company.2024

Qualifications

Extensive experience in remote sensing and GIS applications for drought management

Proficient in teaching and mentoring students in agricultural sciences Leadership roles in multiple organizations focused on agricultural development and environmental protection. I have a solid understanding of MS Office, including Excel and PowerPoint, and am skilled in data collection and quality assurance processes. I am proficient in SPSS software for statistical analysis and have experience using GIS, Remote Sensing, ArcGIS Pro, ERDAS Imagine, and GPS tools for map creation and location determination. My experience includes monitoring design projects, training new staff, and coordinating with various departments to ensure all project phases adhere to the schedule.

Language qualifications such as IELTS or any equivalent

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|-----------------------|------------------------------|-----------|--------------------|-------------------|-----------|
| mother tongue(s) | Kurdish (sorani and badene) | | | | |
| English language | understanding | | speaking | | writing |
| | listening | reading | spoken interaction | spoken production | |
| replace with language | very good | very good | very good | very good | very good |
| Arabic language | understanding | | speaking | | writing |
| | listening | reading | spoken interaction | spoken production | |
| replace with language | very good | very good | very good | very good | very good |

Teaching experience:

List of teaching Subjects

- Remote sensing 4th year student-Environmental sciences department –College of Science
- GIS 4th year student-Environmental sciences department –College of Science
- Remote sensing and GIS 3rd stage students of Forestry department and Department of Field crops
- Forest management-4th year students- Forestry department
- Precision Agriculture- Elective subject for 4th year students- Forestry department.
- Precision Agriculture 3rd stage students of Field Crop department
- Forest management-4th year student-Environmental sciences department –College of Science
- Principle of Forestry -3rd stage students of Forestry department
- Student project for 4th year students.

Lab supervision

I have three years lab experience to give assistance for postgraduate and undergraduate students for usings and Remote sensing Program, tools and machines such as caliper, haga, oven ect.

Research and publications

- 1- Gaznayee, H.A.A., Al-Quraishi, A.M.F ,2019. **Analysis of Agricultural Drought's Severity and Impacts in Erbil Province, the Iraqi Kurdistan Region based on Time Series NDVI and TCI Indices for 1998 through 2017.**Published in Jour of Adv Research in Dynamical & Control Systems, Vol. 11, No. 11, 2019.**(SCOPUS)**
- 2- Gaznayee, H.A.A; Al-Quraishi, A.M.F,2020. **Analysis of Agricultural Drought, Rainfall, and Crop Yield Relationships in Erbil Province, the Kurdistan Region of Iraq based on Landsat Time-Series MSAVI2.** Published in Jour of Adv Research in Dynamical & Control Systems, Vol. 11, 12-Special Issue, 2019 .**(SCOPU)**
- 3- Gaznayee, H.A.A.; Al-Quraishi, A.M.F.; Wu, W,2019. **Spatiotemporal Characteristics of Drought in the Iraqi Kurdistan Region using Landsat Time - Series Images based on VHI and VCI Indices of 1998 - 2017. 2019.** Accepted in the ICGITA2019 Conference, Nanchang, China.**(SCOPUS)**
- 4- Gaznayee, H.A.A.; Al-Quraishi, A.M.F,2020. Identifying Drought Status in **Duhok Governorate (Iraqi Kurdistan Region) from 1998 through 2012 using Landsat Time Series Datase.** Published In Journal of Applied Science and Technology Trends. Vol. 01, No. 01, pp. 17 –23(2020) **(DOI)**
- 5- Kakakhan, H., Shekhany, A., Gaznayee, H.A.A., 2018. **The study of chemical composition of gum in Pistacia atlantica in Erbil region.** Zanco Journal of Pure and Applied Sciences 30, 26–32.2018.**(DOI)**
- 6- Gaznayee, H.A.A., Al-Quraishi, A.M.F, D Joseph P. Messina.
Drought severity trend analysis based on the Landsat timeseries dataset of 1998-2017 in the Iraqi Kurdistan Region
IOP Conf. Series: Earth and Environmental Science 779 (2021) 012083
doi:10.1088/1755-1315/779/1/012083.**(DOI)**
- 7- Al-Quraishi, A., Razvanchy, H. and Gaznayee, H., 2021. **A Comparative Study for Performance of Five Landsat-based Vegetation Indices: Their Relations to Some Ecological and Terrain Variables.** Journal of Geoinformatics & Environmental Research, 1(1), pp.20-37.**(DOI)**
- 8- Al-Quraishi, A.M., Gaznayee, H.A. and Crespi, M., 2021. **Drought trend analysis in a semi-arid area of Iraq based on Normalized Difference Vegetation Index, Normalized Difference Water Index and Standardized Precipitation Index.** Journal of Arid Land, 13(4), pp.413-430.**(Impact 3.35)**
- 9- Lorenz Huebner, Al-Quraishi, A.M., Oliver Branch, Gaznayee, H.A.
Afforestation and Simulated Risks of Heatwaves and Flooding Versus Ecological Revegetation That Combines Planting and Succession
Journal of Geoscience and Environment Protection, 2022, 10, 94-108
https://www.scirp.org/journal/gep
ISSN Online: 2327-4344
ISSN Print: 2327-4336**(Scopus)**
- 10- Lorenz Huebner, Al-Quraishi, A.M., Oliver Branch, Gaznayee, H.A.
Review Paper
New approaches: Use of assisted natural succession in revegetation of inhabited arid drylands as alternative to large-scale afforestation
SN Applied Sciences (2022) 4:80 | https://doi.org/10.1007/s42452-022-04951-y -Review Paper.
(Scopus)
- 11- Lorenz Huebner, Al-Quraishi, A.M., Oliver Branch, Gaznayee, H.A.
BOOK: Sustainable Renaturation in Desertification Control: Expediting the Natural Succession of Large-Scale Vegetation in Drylands. (Scopus)
Chapter Title: **Sustainable Renaturation in Desertification Control: Expediting the Natural Succession of Large-Scale Vegetation in Drylands.**
Online ISBN:978-3-030-86803-1

Print ISBN:978-3-030-86802-4 (**Scopus**)

12- Mentor in Master of Science Thesis By Kawa Kamal Ali Hakzi Kawa Kamal Ali Hakzi MSc Thesis WSE-IEMFS.22-07 April 2022

Spatiotemporal variation of wheat yield and water productivity in centre pivot irrigation systems A Case Study in North Erbil, Kurdistan, Iraq (Master Theses)

13- Heman Abdulkhaleq A. Gaznayee ,Ayad M. Fadhil Al-Quraishi ,Karrar Mahdi and Coen Ritsema, **A Geospatial Approach for Analysis of Drought Impacts on Vegetation Cover and Land Surface Temperature in the Kurdistan Region of Iraq**. Water 2022, 14(6), 927; <https://doi.org/10.3390/w14060927> (**Impact 3.35**)

14- Heman Abdulkhaleq A. Gaznayee et al. (2022) ‘**Drought Severity and Frequency Analysis Aided by Spectral and Meteorological Indices in the Kurdistan Region of Iraq**’. Water 2022, 14, 3024. <https://doi.org/10.3390/w14193024> . (**Impact 3.35**)

15- Mohsin Abdulhay Desher Heman Abdulkhaleq A. Gaznayee. **Tomato (Solanum esculentum L.) growth under compost application. The case of climate-smart agriculture in Iraq**. Department of Forestry, College of Agriculture Engineering Science, Salahaddin University, Erbil 44003, Kurdistan Region, Iraq, Heman.ahmed@su.edu.krd(**Scopus**)

16- Heman Abdulkhaleq A. Gaznayee.(2023). **Integrating remote sensing techniques and meteorological data to assess optimal irrigation system's performance scenarios to improve the crop yield. Under publication in Water Journal**. Water 2023, 15, 1605. <https://doi.org/10.3390/w15081605> (**Impact 3.35**).

17- Abdalkarim, K.O., Gaznayee, H.A.A. and Al-quraishi, A.M.F. (2023) ‘**Predictive Digital Mapping of Surface Soil Properties using Remote Sensing and Multivariate Statistical Analysis** .’, ZANCO Journal of Pure and Applied Sciences, 35(6), pp. 189–203. Available at: <https://doi.org/http://dx.doi.org/10.21271/zjpas> Predictive.

18- Zaki, S.H., Gaznayee, H.A.A. and Hawez, P.S. (2023) ‘**Multi-sensor Satellite Drought Analysis using Landsat and MODIS Time- Series Based on NDVI and Rainfall**’, ZANCO Journal of Pure and Applied Sciences, 35(6), pp. 205–207. Available at: <https://doi.org/http://dx.doi.org/10.21271/zjpas> Multi-sensor

Conferences and courses attended

1. Participation in the UNEP Workshop on Biodiversity Conservation and Natural Resources management. (Sep.29th-oct.2nd 2005, Amman, Jordan).
2. Participation in Conference Kurdistan Environment development policy (18-20 march 2006 in Duhok -Iraqi Kurdistan region).
3. Participation in 2nd Conference Let Water Resource of Kurdistan be a mean of wealth and Economy (25-27 April 2007 in Duhok -Iraqi Kurdistan region).
4. Participation in the Environment Training course for MOA and College of Agriculture In KRG- (10-12 November, 2012).
5. Participation in Conference Application of GIS in Spatial Research in Qadisia University (10-11 June2020).
6. Participation in The Second International Conference on Water Resources in Arid Areas 2020” via Zoom Webinar .Organized by Water Research Center at Sultan Qaboos University jointly with the Ministry of Agriculture, Fisheries Wealth & Water Resources -November 9-11, 2020.
7. Participation in The 2nd International Conference of Al-Karkh University of Science (**ISC2/KUS2020**) Baghdad, Iraq, 2-3 December, 2020
8. <http://www.en.iscgr.kus.edu.iq>.

9. Participation in International Conference International Collaborative Conference of Modern Agricultural Technologies (**ICCMAT**) 2021. The 2nd Conference for College of Agricultural Engineering Sciences, Salahaddin University-Erbil and 6h Conference for College of Agriculture, University of Anbar
10. Participation in International Workshop entitled “Establishing Partnerships & Strengthening Capacities in Efficient Water Management & Climate-Smart Agriculture in Iraq” in Wageningen, The Netherlands from 8th to 12th November 2021.
11. For successful completion of the course: Climate-smart irrigation strategies to improve salinity control and enhance agricultural production in Iraq
eTraining course Wageningen, September - December 2021
12. Member of Iraqi technical advisory group/multidisciplinary team (TAG) Steering Committee Structure at country level WaPOR pilot project in Iraq for Monitoring land and water productivity by Remote Sensing (**WaPOR phase 2**)
13. Participate in Course of (Training of Trainers) for the project Al-Taeyush-integrated and multidimensional community based processed of socio-economic inclusion and cohesion to strengthen the resilience of vulnerable ethnic-religious groups “AID-012590/05/2.funded by AICS (Italian agency for Development Cooperation) For 30 hours in FOCSIV office Erbil-Iraq from 12th-to 16th February-2023.
14. Enroll in the Climate Smart and Entrepreneurship Training Course as part of the TMT-Iraq project.08/01/2024. Erbil -Iraq.
15. Participate in the workshop at Wageningen International University in cooperation with iCRA International, in Wageningen University & Research , Netherlands, from February 26 to March 1, 2024. This workshop was organized as part of the (TMT+ Iraq) project. Titled: Capacity Building for the Integrated Network of Water Experts and Entrepreneurship for the Orange Knowledge Program initiated by the Dutch Government and managed by Nuffic Global Development.Netherlands, from February 26 to March 1, 2024
16. Participate in the workshop :Enhancing the Capacity of Water Experts' Network and Integrated Entrepreneurship. The Orange Knowledge Programme is backed by Nuffic Global Development and financed by the Ministry of Foreign Affairs. Salahaddin University-Erbil, June 23 to June 29, 2024.

Training Courses

1. Computer training course
2. CSA and Supply Chain: ‘Value chain design and post-harvest logistics
3. Monitoring and Implementing Drought Mitigation in Iraq
4. Training courses on Going Places with Spatial Analysis 6 weeks Completed on October 11, 2019 - Esri training course) Esri.com/training.
5. Training courses on Cartography 6 weeks Completed on May 23, 2019 -Esri training course) Esri.com/training.
6. Trainer in Training course on: ‘Introduction to remote sensing derived FAO WaPOR database’ Training Workshop 15-17 May 2022 Venue: Royal Tulip Al Rasheed Hotel, Baghdad, Iraq.
7. Trainer in Training course on: Monitoring and Implementing Drought Mitigation in Iraq 27 – 29 March 2022 Lead, partner universities: Salahaddin University - Departments of Forestry and Soil and water, College of Agriculture Engineering Sciences.
8. As Trainer in the Training Course Titled: Land Use Land Cover Change Detection and Monitoring of Urban Growth Based on Remote Sensing and GIS Techniques. As a part of WFP Project in Ministry of Planning-Kurdistan Region Statistics Office. From 13 to 24 November 2022.
9. Trainer in the Training Course Titled Essential Training Workshop of Land Use Land Cover (LULC) using Google Earth Engine (GEE)From 14 to 16 May 2023.Baghdad-Iraq.

Seminars presented

1. Field data collection using Kobo Toolbox.
2. World University Ranking 2024.
3. Integrating Remote Sensing Techniques and Meteorological Data to Assess the Ideal Irrigation System Performance Scenarios for Improving Crop Productivity.
4. Integrate Terrain Variables and Rapid Eye Satellite in Vegetation Indices, for Identifying Forest Cover . Area and Density: A Case Study in Mountainous Iraqi Kurdistan Region (IKR).
5. Water Security in Kurdistan Challenges and Solutions.
6. Land Use Land Cover (LULC) using Google Earth Engine (GEE).
7. Mapping and locating water resource projects within Erbil's modified master plan.

Funding and academic awards

- List any bursaries, scholarships, travel grants or other sources of funding that you were awarded for research projects or to attend meetings or conferences.

Professional memberships

1. Kurdistan Agriculture Engineers syndicates
2. President, Century Organization for Environment and Humanitarian Relief (COEHR)
3. Project Manager, Sapan Organization for Agricultural Extension and Development (SOAED)

Professional Social Network Accounts:

Webpages:

Google Scholar: (Citations> 174)

- [LinkedIn](#)
- [ResearchGate](#)
- [Google Scholar](#)
- [ORCID](#)
- [Academia.edu](#)

<https://scholar.google.com/citations?user=yVgGccAAAAAJ&hl=en>

<https://orcid.org/0000-0002-1549-407X>

<https://www.researchgate.net/profile/Heman-Gaznayee>

<https://www.linkedin.com/in/heman-gaznayee-55422579>

<https://independent.academia.edu/HemanGaznayee>

<https://www.culti-vision.com/>



Academic cover

Heman Abdulkhaleq Ahmed Gaznayee is a distinguished agricultural engineer and remote sensing expert in Iraq. He has dedicated his career to researching drought and its impact on agriculture, utilizing remote sensing and GIS technology. He holds a Ph.D. in Remote Sensing and Drought from Salahaddin University, where he also served as an Assistant Lecturer and later as a PhD Lecturer.

My academic journey has been marked by a continuous pursuit of excellence and a strong commitment to research. I completed my PhD at Salahaddin University-Erbil in 2020, where my research focused on utilizing remote sensing and GIS technologies to analyze and manage drought conditions. My Master of Science degree in Plant Production, also from Salahaddin University, provided me with a solid foundation in natural resource management, silviculture, and forest resource assessment. My BSc in Plant Production further enriched my understanding of various agricultural and environmental sciences.

My research has led to several significant publications in high-impact journals. These include studies on agricultural drought severity, the relationship between rainfall and crop yield, and the application of Landsat Time-Series Images for drought analysis. My work has been recognized and cited by peers, underscoring its impact and relevance in the field.

In addition to my academic credentials, I have held various positions that have honed my skills in teaching, research, and leadership. As an Agricultural Engineer at the Environmental Protection Foundation in Kurdistan, I gained practical experience in environmental management. My tenure as an Assistant Lecturer and later as a PhD Lecturer at Salahaddin University allowed me to mentor students and conduct cutting-edge research.

As the CEO of CultiVision Company, I lead efforts to innovate in agricultural technologies and sustainable practices. My role as President of the Century Organization for Environment and Humanitarian Relief (COEHR) and Project Manager at the Sapan Organization for Agricultural Extension and Development (SOAED) has provided me with extensive experience in managing large-scale projects and working with diverse teams.

I have a strong background in teaching various subjects, including remote sensing, GIS, forest management, and precision agriculture. My experience includes supervising laboratory work and assisting postgraduate and undergraduate students with remote sensing tools and techniques. I am dedicated to fostering a collaborative and innovative learning environment that encourages students to explore and excel.