

NASER ALMANASEER, PhD

Associate Professor of Civil Engineering - Water Resources and Environment

COMPETENCES

➤ **ACADEMIA**

Teaching graduate and undergraduate university courses including Surface Water and Groundwater Hydrology, Environmental Engineering, Environmental Impact Assessment, Hydraulic Structures, and Water Resources and Environmental Modeling. Also, Curriculum Development, E-Learning, Academic Supervision, and Tailored Training in Water and Environment.

➤ **MANAGERIAL**

Chairman - Civil Engineering Department

Director - International Cooperation and Relationships.

Vice Dean - Scientific Research Deanship.

Projects Manager and Coordinator – Nine previous and on-going International Projects.

Board Member - Faculty of Civil Engineering Council.

Board Member - Salt Technical College.

Board Member of International Research Center for Water Environment and Energy



➤ **RESEARCH AND DEVELOPMENT PROJECTS**

Active Networking, Stakeholders Involvement, Participatory Approach, Inspired Ideas, Proposals Development, Coordination and Management, Effective Implementation, Financial and Technical Reporting, Outcomes Dissemination, and Sustainable Impact

CURRENT POSITIONS

✓ **Associate Professor of Civil Engineering - Water Resources and Environment**

Department of Civil Engineering - Faculty of Engineering, Al-Balqa Applied University, Al-Salt 19117 Jordan <https://www.bau.edu.jo/index.aspx>

✓ **Regional DUPC Committee Member for the Middle East**

IHE Delft Partnership Program for Water and Development, Delft, The Netherlands

<https://www.un-ihe.org/dupc2-ihe-delft-partnership-programme-water-and-development>

✓ **Projects Manager and Primary Investigator**

Al-Balqa Research Group for Water and Environment (BALQA-WAVE). Al-Balqa Applied University, Al-Salt 19117 Jordan <https://www.bau.edu.jo/index.aspx>

COORDINATES

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BIOGRAPHY

Almanaseer has a PhD in Civil Engineering - Water and Environment, from North Carolina State University in Raleigh, North Carolina - USA, a Master of Engineering in Hydrology and Water Resources from IHE Delft - The Netherlands, and a BSc in Geology and Chemistry from Mansoura State University - Egypt. Almanaseer has over twenty-four years of academic, research and professional experience in water and environment engineering and management. His research interests include hydrology and water resources, wastewater treatment and management, environmental assessment, and climate variability and change. He managed several international Projects funded by USGS, UNDP, USAID, GIZ, NUFFIC, DUPC IHE-Delft, European Commission, and German Government. He came back from the United States and settled in Jordan in 2011 to start working as Assistant Professor of water and environment in the Civil Engineering Department at Al-Balqa Applied University, and he is enjoying his job there until to date. Almanaseer academic experience is well developed in re-designing and teaching fundamental and advanced courses in Engineering Hydrology, Water Resources Engineering, Wastewater Engineering, Environmental Engineering, and Environmental Impact Assessment. Further, Almanaseer supervised several MSc students in his field, and he was invited as examiner in several MSc examination committees as well. Almanaseer served at Al-Balqa Applied University as a chairman for the civil engineering department, vice dean for the scientific research deanship, and he was the founder and director of the international cooperation and relationships office in Al-Balqa Applied University. During his work in management, he showed exceptional managerial skills, made significant enhancement on working protocols, developed and sustained national and international network, and significantly contributed to the university advancement. Almanaseer co-developed project proposals in the field of water and environment, and research innovation, and he secured funds from different funding agencies for eight development and research projects during the period 2012-2020 with a total funding of 3.5 million Euro. He worked as a project manager and primary investigator for the eight projects. Consequently, he gained substantial experience in project management, and showed excellent leadership. Also, he trained and guided his team to effectively implement these projects in collaboration with international educational and research institutions. In addition to his full time job at Al-Balqa Applied University, Almanaseer was selected on 2017 to work part-time as a Regional Committee Member for the Middle East under IHE-Delft Partnership Program for Water and Development - The Netherlands. His duties were to promote the programme in the middle East and to follow up on the planning and implementation of the programme funded projects in the region. Almanaseer is the co-founder and manager of the "Competence Facility for Decentralized Wastewater; Demonstration, Education, Research, and Training" in Jordan, a unique facility established by Al-Balqa Applied University with generous funding from the German Government. Also, he is the co-founder of the Middle East Wastewater Treatment and Reuse Center for technical education, training, and research under establishment at Al-Balqa Applied University – Jordan with substantial funding from NUFFIC, The Netherlands. Furthermore, Almanaseer established research management and technology transfer offices in the Deanship of Scientific Research through a project funded by ERASMUS Plus. Finally, Almanaseer is currently planning to establishing technical and business incubator for water and environment and regional research platform to create proper environment for students and young researchers, and provide them with effective access to tailored training, knowledge sharing platform, and technical skills to improve their employment ability. Further, to help students and graduates initiate their own startups.

End of Biography, for detailed Resume, please see next pages.

EDUCATION

1) Doctor of Philosophy (PHD) in Civil Engineering 2011: Civil, Construction and Environmental Engineering Department, North Carolina State University, Raleigh, North Carolina, 27695 USA. PhD Dissertation: *“Role of Climate Variability in Groundwater-Surface Water Interaction over the Southeast United States”*

2) Master of Engineering in Hydrology and Water Resources 2001: International Institute for Infrastructure, Hydraulic and Environmental Engineering (**UNESCO-IHE**), Delft, The Netherlands. Master Thesis: *“Groundwater Flow Modeling as a Tool in Water Abstraction Management, Study Case in The Netherlands”*

3) Bachelor of Science in Geology and Chemistry 1993: Mansoura University, Egypt. Graduation Project: *“Groundwater Availability Assessment in the Egyptian Delta Region”*

PROFESSIONAL EXPERIENCE

1) Associate Professor of Civil Engineering - Water Resources and Environment: Aug 2020–Present. Department of Civil Engineering, Al-Balqa Applied University Al Salt 19117 Jordan. Designed and taught water and environment courses including Engineering Hydrology, Water Resource Engineering, Wastewater Engineering, Environmental Engineering, and Environmental Impact Assessment. Supervised several graduation projects and MSc students, and provided several training courses in water and environment related topics

2) Assistant Professor of Civil Engineering - Water Resources and Environment: Sep 2012 – Aug 2020. Department of Civil Engineering, Al-Balqa Applied University Al Salt 19117 Jordan. Designed and taught water and environment courses including Engineering Hydrology, Water Resource Engineering, Wastewater Engineering, Environmental Engineering, and Environmental Impact Assessment.

3) Lecturer of Civil Engineering - Water Resources and Environment: Sep 2011 – Aug 2012. Department of Civil Engineering, Al-Balqa Applied University Al Salt 19117 Jordan. Designed and taught water and environment courses including Engineering Hydrology, and Water Resource Engineering.

4) Faculty Council Member: Sep 2018 – Sep 2020. Faculty Council Member in the Newly Established “Salt Technical College” in Al-Balqa Applied University. My tasks were to develop the curriculum for the Technical Diploma in Water Treatment Engineering, to participate in a selection committee for hiring new instructors and technicians, to draft lab specifications, and to promote for the program.

5) Head of Department: Sep 2017 – Sep 2018. Head of Civil Engineering Department – Faculty of Engineering, Al-Balqa Applied University

Managed the department with 12 faculty members, and 5 lab technicians and 2 admin staff, with

over 700 students. My tasks included teaching, curriculum development, registration, mentoring, admin and financial responsibility, and represent the department in the Faculty Council. I left after one academic year to dedicate more time to my international projects and MSc Students.

6) Director: Sep 2015 – Sep 2016. Scientific and International Relationships, Al-Balqa Applied University Al-Salt 19117 Jordan. Established and managed the Office of Scientific and International Relations at Al-Balqa Applied University, coordinated the relations with international institutions, expanded effective partnerships with institutions and research centers around the globe in a wide range of academic and research collaboration fields, prepared and followed up on agreements and memorandums of understanding, and facilitated staff exchange programs.

7) Vice Dean: Apr 2013 – Sep 2015. Deanship for Scientific Research, Al-Balqa Applied University Al Salt 19117 Jordan. Co-managed the Deanship; organized several workshops to inform staff and faculty about the upgraded procedures of applications for conferences, proposal development and submission, technical writing, Journals and ranking.

8) PhD Candidate and Research Assistant: Jan 2007 – Aug 2011. Department of Civil, Construction and Environmental Engineering, North Carolina State University, Raleigh NC, USA. PhD Dissertation covers two interconnected topics: a) Climate-surface water-groundwater interaction over the Southeast United States, b) General Circulation Models (GCMs) role and utility toward improving seasonal and monthly streamflow and groundwater predictions.

9) Hydrologist (Part time Internship): Oct 2007 – Mar 2010. United States Geological Survey (USGS), Raleigh NC, USA. a) Managed large hydrological data sets in ArcGIS, with hydrological data representation and analysis, b) performed statistical techniques including principal component analysis (PCA) and singular spectrum analysis (SSA), and c) supervised field work and data collection.

10) Instructor: Sep. 2005 – Dec. 2006. Department of Water Resources and Environmental Management, Faculty of Agricultural Technology, Al-Balqa Applied University, Al-Salt 19117 Jordan. a) Teaching courses: Applied geology, groundwater hydrology, water resources engineering, water harvesting, and environmental science. b) Research projects: The impact of phosphate mining activities in southern Jordan on the water resources quantity and quality.

11) Hydrogeologist: Jan 2005 – Sep 2005, United States Geological Survey (USGS), Amman Office – Jordan. a) Co-managed Jordan's National Groundwater Database. b) evaluated selected groundwater flow models in Jordan, and c) trained geologists and Hydrogeologist on office and field tasks

12) Water Resources Specialist: Jun 2004 – Jan 2005. Jordanian Ministry of Environment in collaboration with the European Union - Integrated Watershed Management Project, Jerash–Jordan. a) Established hydrologic database for selected watersheds in Northern Jordan. b) defined the major water resource problems within the investigated watersheds, and c) supervised water and environmental awareness programs

13) Research and Teaching Assistant: Jan 1998 – Dec 2003. University of Jordan - Water Research and Environment Study Center, Jordan. a) Courses: Geology, hydrology, hydrogeology, GIS, and environmental Science. b) Research: Contributed to several development and research projects in the field of water and environment, and participated in conducting groundwater-flow models

14) Geologist and groundwater modeler assistant: Mar 1994 – Jan 1998. United Nations Development Program (UNDP) - Azraq Oasis Conservation Project, Jordan a) Developed and calibrated groundwater-flow model for Azraq Basin in Jordan. And b) Applied the developed model to predict aquifer system responses under different scenarios.

CONSULTING EXPERIENCE

1) Team leader: terms of References development for constructing water and environment monitoring system in Wadi Shuaib in Jordan, sponsored by national research project. This is a 30 days consulting job that I volunteered to conduct at no cost to help my home town improve its environment and sanitation level.

2) Team Leader and Water Resources Expert: Environmental Impact Assessment (EIA) for the construction and operation of a decentralized wastewater treatment unit, sponsored by GIZ, 2013: This is a 60 working-days assignment distributed over 3 months and conducted by a team of 5 experts. I supervised the development of the terms of references (ToR), managed the conductance of the EIA during pre-scoping and scoping stages, and designed a training material based on it.

3) Team Leader and Water Resources Expert: Environmental Impact Assessment (EIA) for the construction and operation of a decentralized wastewater treatment unit for Queen Alia Airport in Jordan sponsored by GIZ, 2014. This is a 40 working-days assignment distributed over 2 months and conducted by a team of 4 experts. I supervised the development of the terms of references (ToR), managed the conductance of the EIA during pre-scoping and scoping stages.

4) Climate and Water Resources Expert – Team member: Jordan's Third National Communication to UNFCCC, Climate Change Vulnerability and Adaptation Assessment, sponsored by UNDP Amman, and managed by IUCN Amman, 2014. I provided my services as a climate and water resources expert for about five months (Jan – Jun 2014). My responsibilities were to assess the vulnerability of water resources sector to climate change in Jordan with the emphasis on the Zarqa River Basin, document the existing adaptive capacity for the water sector in Jordan and evaluate potential adaptive capacities including alternative water resources.

5) Climate and Water Resources Expert - Consultant on the preparation of ToR for the development and downscale Hydro-climate model sponsored by United Nations Development Programme (UNDP), Programme of Assistance to the Palestinian People, 2014. I provided my services as a climate and water resources expert to draft a ToR for the development and downscaling of hydro-climate models from global circulation models (GCMs) for three major basins in Israel, Jordan and Palestine

6) Climate and Water Resources Expert - Project Manager: SWIM Sustain Water MED Project, in collaboration between with GIZ Amman and Al-Balqa Applied University, sponsored by European Union and German Government. March 2013– Sept 2015. The main goal of this project is to provide alternative water resource (reclaimed water) for the public security department in Amman, Jordan to cope with climate stresses. My responsibilities are to assist in designing, constructing, installing, and implementing a decentralized waste water treatment plant with SBR technology. Also, to provide training on EIA and OM related to this plant. During this period, I co-developed four ToRs for the baseline study, for the Environmental Impact Assessment, and for wastewater treatment.

GRANTS FOR RESEARCH AND DEVELOPMENT PROJECTS

Project Manager and/or Coordinator for all the following Projects

- 1) Improving Water Productivity and Livelihoods in the Jordan Valley by Using Recycled Wastewater and Groundwater in Agriculture (VALLEYWATER). Project No. 109127, Ref. No. DUPC2/222/WJD funded by DGIS- IHE Delft Programmatic Cooperation (DUPC2), IHE Delft – The Netherlands. The total funding is **250,000.00 Euro**
- 2) Strengthening knowledge and innovation in the water for agriculture sector with a focus on skills development and improving water governance and institutional structures in Jordan (WATRA) funded by NUFFIC, The Netherlands and implemented in collaboration with IHE-Delft and World Water Academy – The Netherlands. The total grant is **890,000.00 Euro**
- 3) Modernization of Institutional Management of Innovation and Research in South Neighboring Countries (MIMIR). Funded by Erasmus Plus. GRANT_NUMBER: 561548-EPP-1-2015-ES-1-EPPKA2-CBHP-SP. Total Funding is **850,000.00 Euro**
- 4) Decentralized Wastewater Management, funded by NUFFIC, The Netherlands and implemented in collaboration with IHE-Delft - The Netherlands. The total grant is **50,000.00 Euro**
- 5) Water and Sanitation Solutions to Refugees: Two Cases from Jordan and Palestine (WASAR) funded by the Dutch Government and implemented in collaboration with IHE Delft, The Netherlands 2018-2020 The total grant is **100,000.00 Euro**
- 6) Desalination, Diplomacy & Water Reuse in the Middle East (SCARCE) funded by the Dutch Government and implemented in collaboration with IHE Delft, The Netherlands 2017-2019 The total grant is **250,000.00 Euro**
- 7) Effects of Climate Variability and Change on Groundwater Resources in Jordan, and sponsored by Scientific Research Support Fund (SRSF) Jordanian Ministry of Higher Education and Scientific Research The total grant is **90000.00 Euro**
- 8) Sustainable Management of Available Water Resources with Innovative Technologies (SMART) implemented in collaboration with Helmholtz Environmental Research Center (UFZ) and funded by the German Federal Ministry of Education and Research (BMBF) in Germany 2016-2018 The total grant is **650,000.00 Euro**
- 9) Sustainable Water Integrated Management (SWIM) co-funded by the European Union, and implemented in collaboration with GIZ – Germany 2013-2016. The total grant is **850,000.00 Euro**

AWARDS AND SCHOLARSHIPS

- 2000-2001 Netherlands Fellowship Program, Master Full Scholarship – The Netherlands
- 2007-2009 U. S. Geological Survey (USGS) Internship, Raleigh - North Carolina, USA
- 2007-2011 Al-Balqa Applied University, PhD Full Scholarship, Raleigh - North Carolina, USA
- 2015 Erasmus Mundus, Post Doctorate, Berlin-Germany (Apologized due to lack of time)

PROFESSIONAL MEMBERSHIPS

- ✓ Jordanian Engineers Association
- ✓ American Society of Civil Engineers
- ✓ International Association of Hydrological Sciences

SELECTED TRAINING COURSES

- 1) Emerging Pollutants in Wastewater Reuse in Developing Countries, Jordan, 20-22 November 2018. Sponsored and implemented by UNESCO-IHP International Initiative on Water Quality
- 2) Decentralized wastewater Management for adaptation to climate change, Berlin - Germany, from 25 Sep – 5 Oct 2016. Sponsored by GIZ
- 3) Application Measures to Reduce Climate Changes Impacts on Food Productivity in Jordan, Sep. 2012 sponsored and supervised by Food and Agriculture Organization (FAO) and Al-Shamil Engineering Office (SEO), Jordan
- 4) International Training Workshop on Rainwater Harvesting and Utilization in Lanzhou City, China, from 11-29 October 2012. Sponsored by the Ministry of Science and Technology (MOST) of the People's Republic of China, Gansu Research Institute for Water Conservancy
- 5) Water and Evaluation Program Workshop (WEAP), Nov. 2011 sponsored by UNESCO, Amman
- 6) Integrated management for water resources by using mathematical models, Sep 2005, Sponsored by Al-Balqa Applied University (BAU), Jordan
- 7) Introduction to ArcGIS I, Feb 2005, sponsored by United States Geological Survey (USGS), Jordan
- 8) Introduction to ArcGIS II, Feb 2005, sponsored by United States Geological Survey (USGS), Jordan
- 9) Advanced GIS-based water resources management, Dec 2002, sponsored by United States Agency for International Development (USAID) in collaboration with the University of Jordan.

SELECTED PUBLICATIONS

- 1) **Naser Almanaseer**, Hydrologic System Protection by Decentralized Wastewater Treatment Technologies in Jordan. Jordanian Journal of Engineering and Chemical Industries, 2020-04-16
- 2) **Naser Almanaseer**, B Abbassi, C Dunlop, K Friesen, and E Nestico-Semianiw. Multi-Criteria Analysis of Waste-to-Energy Technologies in Developed and Developing Countries. Environmental Research, Engineering and Management. 2020-03-27
- 3) **Naser Almanaseer**, M Hindiyeh, and R Al-Assaf. Hydrological and environmental impact of wastewater treatment and reuse on Zarqa river basin in Jordan. Environments – MDPI, 2020

- 4) **Naser Almanaseer**, Rainwater Harvesting for Adaptation to Water Scarcity in Refugees Camps in Jordan December 2019 Journal of Engineering and Applied Sciences 15(5) DOI: 10.36478/jeasci.2020.1180.1189. Project: WASAR - Water and Sanitation Solutions to Refugees: Two Cases from Jordan and Palestine
- 5) **Naser Almanaseer** and Ralad Taany. Hydrological Study and Aquifer Characteristics Evaluation of Wadi El Arab Catchment Area/Jordan November 2019 International Journal of Current Microbiology and Applied Sciences 8(11):2058-2070 DOI: 10.20546/ijcmas.2019.811.238
- 6) Bassim Abbasi, Rihan Harb, Bashar Ammary, **Naser Almanaseer**, and Christopher Kinsley. Modified Septic Tank: Innovative Onsite Wastewater Treatment System April 2018 Water 10(5):578 DOI: 10.3390/w10050578 Projects: SMART (Sustainable Management of Available Water Resources with Innovative Technologies)
- 7) Alaeddin b Tahboub, Rakad Taany, Nedal Al Ouran, **Naser Almanaseer**, Muath Azmi. Modeling the Transport of Potassium Level in Yarmouk Basin Using SWMS-3D Model December 2014 Current World Environment 9(3):646-652 DOI: 10.12944/CWE.9.3.13
- 8) Dongyuan Sun¹, a, Chengyi Zhao, Yuanhong Li¹, Dongmei Peng and **Naser Almanaseer**, Fractal Study of Land Use Change in the Tailan River Basin, Xinjiang, China, Advanced Materials Research Vols. 955-959 (2014) pp 3968-3973. DOI: 10.4028/www.scientific.net/AMR.955-959.3968
- 9) **Almanaseer, N.**, Sankarasubramanian, A., and Bales, J. "Improving Groundwater Predictions Utilizing Seasonal Precipitation Forecasts from GCMs Forced with SST Forecasts." Jan 2014 Journal of Hydrologic Engineering 19(1):87-98 DOI: 10.1061/(ASCE)HE.1943-5584.0000776
- 10) Tarek G. Ammari, Rakad A. Ta'any, Samih Abu-Baker, Alaedeen B. Tahboub, **Naser Almanaseer**, Nedal Aloran, Raihan Abu Harb, Taleb R. Abu-Zahra, Saeid M. Abu-Romman, Issam M. Qrunfleh, and Maen K. Hasan, Vegetative bioremediation of extremely salt-affected calcareous soils, Journal of Food, Agriculture and Environment (JFAE) 11(2):1277-1281, 2013
- 11) T.G. Ammari, R. Tahhan, Samih Abubaker, Y. Al-Zu'bi, A. Tahboub, R. Ta'any, S. Abu-Romman, **N. Almanaseer**, and M.H. Stietiya, Soil Salinity Changes in the Jordan Valley Potentially Threaten Sustainable Irrigated Agriculture, Journal of Bedosphere, 23(3), 376-384, 2013
- 12) Rakad A. Ta'any, Mohammad A. Alaween, Mustafa M. Al-Kuisi and **Naser Almanaseer**, GIS Based Model of Groundwater Vulnerability and Contamination Risk of Wadi Kufrinja Catchment Area, Jordan, World Applied Sciences Journal 24 (5): 570-581, 2014
- 13) **Almanaseer, N.**, and A. Sankarasubramanian, Role of Climatic Variability in Influencing Interannual Groundwater Variability over SE US, Journal of Hydrological Engineering, 17(9), 1001-1010, 2013 DOI: 10.1061/(ASCE)HE.1943-5584.0000536
- 14) Chapman M.J., **Almanaseer Naser**, McClenney Bryce, and Hinton Natalie, 2011, Fluctuations in groundwater levels related to regional and local withdrawals in the fractured-bedrock groundwater system in northern Wake County, North Carolina, March 2008–February 2009: U.S. Geological Survey Scientific Investigations Report 2010–5219, 60 p.

SELECTED ACTIVITIES LINKS

<https://www.jordantimes.com/news/local/ihe-delfts-water-development-partnership-programme-concludes-mission-jordan-0>

<https://arabwaterweek.com/scientific-committee/dr-naser-almanaseer/>

<https://www.hollandalumni.nl/article/successful-tailor-made-training-in-jordan-for-syrians/13/03/2019/520>

<http://www.alanbatnews.net/post.php?id=212108>

<https://www.un-ihe.org/news/inception-workshop-dupc2-project-wasar-mentioned-jordan-times?back=747645>

<https://www.un-ihe.org/stories/collaborative-action-support-water-and-sanitation-solutions-middle-east>

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