

DR MOHAMMAD MUQTADA ALI KHAN

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Presently: Working as a Senior Lecturer, Department of Geoscience, Faculty of Earth science, University Malaysia Kelantan, Campus Jeli, Locked Bag No 100, JELI 17600, Kelantan, MALAYSIA since July 2011 to till date.

Research specialization:

- Hydrogeology
- Groundwater chemistry
- Water Resource estimation
- Groundwater Modeling
- Flood Studies

Presently Teaching Courses:

- Hydrogeology
- Exploration of groundwater and development
- Groundwater monitoring
- Earth Process
- Introduction to Geoscience
- Paleontology
- Advance Technology in Geoscience

Academic Qualifications:

Ph.D. Geology (Hydrogeology) 2009, Aligarh Muslim University, India

Thesis Title: Sustainability of Groundwater System in parts of Krishni-Hindon interstream Western Uttar Pradesh: A Quantitative and Qualitative Assessment

M.Phil Geology (Hydrogeology) 2004, Aligarh Muslim University, India

Thesis Title: Hydrogeology and Groundwater quality characteristics of the Kali-Hindon sub-basin, in parts of western U.P

M.Sc. (Applied Geology) 2003, Aligarh Muslim University, India

B.Sc. (Hons.) Geology 2001 from Aligarh Muslim University, India

Research Publications:

PUBLICATIONS FOR 2018

1. Wani Sofia Udin, Nurul Asyikin Binti Ismail, Arham Muchtar Achmad Bahar and **Mohammad Muqtada Ali Khan** (2018) GIS-based River Flood Hazard Mapping in Rural Area: A Case Study in Dabong, Kelantan, Peninsular Malaysia, **Asian Journal of Water, Environment and Pollution**, Vol. 15, No. 1 (2018), pp. 47–55. DOI 10.3233/AJW-180005

2. Mohd Talha Anees, **Mohammad Muqtada Ali Khan** & others (2018) Spatial estimation of average daily precipitation using multiple linear regression by using topographic and wind characteristics variables in tropical climate, **Journal of Environmental Engineering and Landscape Management** Volume 26 Issue 4: 299–316, <https://doi.org/10.3846/16486897.2018.6337>
3. **Mohammad Muqtada Ali Khan**, & others (2018) Evaluating the suitability of shallow aquifer for irrigational purposes in some parts of Kelantan, Malaysia, **Bulletin of the Geological Society of Malaysia**, Volume 66, December 2018, pp. 45 – 53
4. **Mohammad Muqtada Ali Khan** & others (2018) Groundwater quality assessment of domestic shallow dug wells in parts of Tanah Merah district, Malaysia, *Journal of Tropical Resources and Sustainable Science*, Vol 6, pp 62-67.

PUBLICATIONS FOR 2017

5. **Mohammad Muqtada Ali Khan** Nur Hanis Aflatoon And Hafzan Eva Mansor (2017) "Distribution Of Trace Elements In Groundwater Around Beris Lalang Landfill Bachok, Kelantan, Malaysia" , **Asian Journal Of Water, Environment And Pollution**, Vol. 14, No. 1 (2017), pp. 41–50.
6. **Mohammad Muqtada Ali Khan**, Fatin Wahida , Hafzan Eva Mansor (2017) "Significance of Silica Analysis in Groundwater Studies of Domestic Shallow Wells in Parts of Jeli district, Kelantan, Malaysia, **Chapter in Book, Page No-103-114, Book title- Water resources in Arid Area: the way forward, Springer International Publishing AG 2017**, ISBN 978-3-319-51856-5, Springer Water, DOI 10.1007/978-3-319-51856-5_7
7. Dony Adriansyah Nazaruddin, **Mohammad Muqtada Ali Khan** and others (2017) Geological Assessment of Water-Based Tourism In Jeli District, Kelantan, Malaysia, **Chapter in Book, Page No- 173-195, Book title- Water resources in Arid Area: the way forward, Springer International Publishing AG 2017**, ISBN 978-3-319-51856-5, Springer Water, DOI 10.1007/978-3-319-51856-5_11.
8. Kishan Raj, Hafzan Eva Mansor and **Mohammad Muqtada Ali Khan** (2017) "Distribution of Nitrate and Fluoride in Shallow Domestic Groundwater Wells in Northern Parts of Kelantan, Malaysia, **SCIENCE INTERNATIONAL, 29(1),99-104.**
9. Dony AdriAnsyah Nazaruddin, Hafzan Eva Mansor & **Mohammad Muqtada Ali Khan** (2017) Some unique and imaginative mimetoliths in selected limestone sites in Malaysia: study on their formational processes and geotourism potentials, *Bulletin of the Geological Society of Malaysia*, **Bulletin of the Geological Society of Malaysia, Volume 64, December 2017, pp. 17 – 25**

PUBLICATIONS FOR 2016

10. Dony Adriansyah Nazaruddin, Zafirah Sakinah Amiruzan, Hamzah Hussin, **Mohammad Muqtada Ali Khan** and Mohamad Taufiq Mohd Jafar (2016) "Geological Mapping And Multi-Electrode Resistivity Survey For Potential Groundwater Exploration In Ayer Lanas Village And Its Surroundings, Jeli District, Kelantan, Malaysia", **Chiang Mai J. Sci. 2016; 43(6) : 1335-1345**
11. Nor Ashikin Binti Shaari, **Mohammad Muqtada Ali Khan**, Arham MuchtarAchmad Bahar and Dony Adriansyah bin Nazaruddin (2016) "Estimation of Infiltration rate in major soil types of Kelantan, Malaysia" **Bulletin of the Geological Society of Malaysia, Vol 62, December 2016, pp.7-11.**

PUBLICATIONS FOR 2015

12. **Mohamad Muqtada Ali Khan**, Nor Ashikin Shaari, Donny Adriansyah Bin Nazaruddin, Hafzan Eva Bt Mansoor (2015) Flood-Induced River Disruption: Geomorphic Imprints and Topographic Effects in Kelantan River Catchment from Kemubu to Kuala Besar, Kelantan, Malaysia , **International Journal of Geological and Environmental Engineering** Vol:9 No:1, 10-14
13. Dony Adriansyah Nazaruddin, Ibrahim Busu, Hafzan Eva and **Mohammad Muqtada Ali Khan**, (2015) Geoheritage as the bases of geotourism Development: A case study in jeli district, Kelantan, Malaysia, *GeoJournal of tourism and Geosites*, year VIII, no 1, Vol 15, PP 25-43.
14. Dony Adriansyah Nazaruddin, Zurfarahin Zulkarnain, Nur Syazwani Md. Fadilah, **Mohammad Muqtada**

Ali Khan, Arham Muchtar Achmad Bahar (2015) Study on Geoheritage and Water Quality of Pos Hendrop Hot Spring, Lojing Highlands, Kelantan, Malaysia, **Journal of Tropical. Resources and Sustainable Science**, Vol 3, pp 222-233

PUBLICATIONS FOR 2014

15. **Mohammad Muqtada Ali Khan**, and others (2014) Impact of the Flood Occurrence in Kota Bharu, Kelantan Using Statistical Analysis, **Journal of Applied Sciences**, 14 (7), 1944-1951 DOI:10.3923/jas.2014.
16. Najeebullah Khan, Md. Azizul Baten and **Mohammad Muqtada Ali Khan** and Shafiqur Rahman (2014) Time-varying Stochastic Frontier Model Approach for Measuring Female Parliamentarian Efficiency of Selected Countries in Asia, **Advances in Natural and Applied Sciences**, 8(3) March 2014, Pages: 127-135
17. Dony Adriansyah Nazaruddin, Arham Muchtar Ahmad Bahar, **Mohammad Muqtada Ali Khan** (2014) Preliminary Study on Potentials of Pumice as the New Material for Floating Devices and Buoy Products, **GSTF Journal of Geological sciences**, Vol 1 No 2. pp 10-13
18. **Mohammad Muqtada Ali Khan**, and others (2014) Flood Impact Assessment in Kota Bharu, Malaysia: A Statistical Analysis, **World Applied Sciences Journal**, 32 (4): 626-634.
19. **Mohammad Muqtada Ali Khan**, Fakhre Alam, Izrar Ahmad and Rashid Umar (2014) Groundwater optimization for sustainable development in monsoon fed aquifer, india, International Scientific Journal on Science Engineering & Technology, Vol 17, No 07, pp 712-722

PUBLICATIONS FOR 2013

20. **Mohammad Muqtada Ali Khan** and others (2013) Estimating Turbidity and Total Suspended Solids to measure Sediment load in Kelantan River, *Advances in Environmental Biology*, 7(14) December 2013, Pages: 4895-4900
21. Shafiqur Rahman, **Mohammad Muqtad Ali Khan** and others (2013) Article Published in a book on Parasitic Zoonoses in Asian-Pacific Regions 2012, Japan entitled Comparative Bio-efficacy of Three Formulations of Pyrethroid Insecticide Aerosol against lab-bred *Culex quinquefasciatus*. ISBN: 978-4-86487-094-8-C3047, Published by SANKEISHA Co Ltd, PP 36-39, **First edition 2013**)
22. Dony Adriansyah Nazaruddin, Arham Muchtar Ahmad Bahar, **Mohammad Muqtada Ali Khan** (2013), PUMICE- BUOY: An Innovative, Rocky product of floating devices, Manuscript for Malaysia Technology Expo (MTE) 2013

PUBLICATIONS FOR 2012

23. **M Muqtada A Khan**, A Baten, Habiba Lateh, and others: "Seasonal Variations in Groundwater Quality: A Statistical Approach", *International Journal of Physical Sciences* Vol. 7(25), pp. 4026-4035.
24. **M Muqtada A Khan**, Rashid Umar and others: "Evaluation of Groundwater Quality Using Linear Regression Model", *Journal of Applied Sciences Research* 8(1): 251-260.
25. Nor Ashikin Shaari, **Mohammad Muqtada Ali Khan** and Arham Muchtar Achmad Bahar: "Impact Analysis of Flood Hazards on Men and Environment in Kota Bharu", *UMT 11th International Annual Symposium on Sustainability Science and Management 09th – 11th July 2012, Terengganu, Malaysia*, pp 881-886.
26. Shahril Abd Halim and **Mohammad Muqtada Ali Khan**: "Generation of Landuse Map and Statistical Analysis of Water Samples", *UMT 11th International Annual Symposium on Sustainability Science and Management 09th – 11th July 2012, Terengganu, Malaysia*, pp 417-423.
27. **Mohammad Muqtada Ali Khan**, Rashid Umar and Izrar Ahmed: "Sustainability of Shallow Aquifer Beneath an Intensive Agricultural Track- A Case Study from Western Uttar Pradesh, India, *2nd international conference on water resources (icwr2012) in conjunction with 20th unesco-ihp regional teering committee meeting for southeast asia and the pacific, organized by UTM, 5-6 November 2012, Langkawi*, paper id 209.

PUBLICATIONS FOR 2011

28. Habibah Lateh, **M Muqtada A Khan** and Jefriza: "Monitoring of Shallow Landslide in Tun Sardon KM 3.9 Pinang Island, Malaysia", International Journal of Physical Sciences, Vol. 6(12), pp. 2989-2999.

PUBLICATIONS FOR 2010

29. **M Muqtada A Khan**, Rashid Umar, and Habiba Lateh (2010): Assessment of Aquifer Vulnerability in Parts of Indo Gangetic Planes, India, International journal of Physical sciences, Vol. 5(11), pp. 1706–1710.
30. **M Muqtada A Khan**, Rashid Umar, and Habiba Lateh (2010): Study of Trace Elements in Groundwater of Western Uttar Pradesh, India, Scientific Research and Essays, Vol. 5(20), pp. 3175-3182.
31. **M Muqtada A Khan** and Rashid Umar (2010): Significance of silica analysis in groundwater in parts of Central Ganga Plain, Uttar Pradesh, India, CURRENT SCIENCE, VOL. 98, NO. 9, pp 1237-1240.

PUBLICATIONS FOR 2009

32. Rashid Umar, Izrar Ahmed, Fakhre Alam and **M Muqtada Khan** (2009): Hydrochemical Characteristics and seasonal variation in Groundwater Quality of an alluvial aquifer in parts of central Ganga Plain, Western Uttar Pradesh, India, Environmental Geology, 58:1295–1300.

PUBLICATIONS FOR 2008

33. Rashid Umar, **M Muqtada A Khan**, I Ahmed and S Ahmed (2008) Implication of Kali-Hindon inter-stream aquifer water balance for groundwater management in Western Uttar Pradesh, Jour. Earth System Science. 117, No.1: 69-78.

PUBLICATIONS FOR 2006

34. Rashid Umar, **M Muqtada A Khan** and A Absar (2006) Groundwater hydrochemistry of a sugarcane cultivation belt in parts of Muzaffarnagar District, Uttar Pradesh, India, Environmental Geology, (49), 7, pp 999-1008.

PAPERS IN UNDER PREPARATION:

1. Study on Seasonal Variation of Hydrogeochemical characteristics of an Alluvial Aquifer in parts Western Uttar Pradesh, INDIA (Under preparation)
2. Method to assess shallow aquifer's sustainability and pertained socio-economic issues in Central Ganga Plain, India (Under preparation)
3. General geology and surface investigation of groundwater potential zone using geological mapping and geographical information system (GIS) at telaga bijih area and ayer lanas area, tanah merah, Kelantan (Under preparation)
4. Sedimentology and petrography of the setap shale formation, Labuan island, Malaysia. (Under preparation)
6. Mohammad Muqtada Ali Khan, Kishan Raj, Wan Zakaria, Isotope Studies On Mechanisms Of Groundwater Recharge In Parts Of Kelantan Malaysia (Under preparation)
7. Mohammad Muqtada Ali Khan, & Others, Current Status Of Groundwater Conditions Quality In Northern Parts of Kelantan, Malaysia (Under preparation)
8. Mohammad Muqtada Ali Khan & others Seasonal Trace element Concentration in Northern part of Kelantan, Malaysia

Ongoing Research Projects:

1. Impact of seawater intrusion on groundwater quality in coastal aquifers of Kelantan, Malaysia, using hydrogeochemistry and stable isotopes (under **Fundamental Research Grant Scheme 2018**) - **As a main researcher, Approved Money RM 105,800**
2. Determination of potential hydrocarbon reservoir using seismic geomorphology analysis of fluvial systems and 3-D time slice technique in Terengganu offshore (Under **Short term Universiti Grant 2018**) - **As a Co Researcher, Money Approved RM 20,000**
3. Mineralogical Identification and Rare Earth Element (REE) Resources in Granitoid Rocks Using Geological and Geochemical Methods in Kelantan (under **Fundamental Research Grant Scheme for Research Acculturation of Early Career Researchers (FRGS-RACER) 2019**) - **As a Co Researcher, Money Approved RM 30,000**
4. Impact of climate change on recharge mechanism in Klang River Basin using hydrogeochemistry and stable isotope characterizations (under **Fundamental Research Grant Scheme 2019**) - **As a Co Researcher, Money Approved RM 145,000**

Completed Research project:

1. Determination of Aquifer depth and source of contamination in groundwater in parts of Kelantan using silica thermometry and stable isotope analysis (under **Fundamental Research Grant Scheme**) - **As a main researcher, Approved Money RM 110,000**
2. Flood causes from geological aspect, impact and mitigation in kota baru, Kelantan (Under **Short term Universiti Grant**)- **As a main Researcher, Money Approved RM 20,000**
3. Delineation Of Groundwater Potential Zones Using Geological And Geophysical Survey In UMK Campus (Under **Short term Universiti Grant**) - **As a main Researcher, Money Approved RM 20,000**
4. Flood damage rapid assessment method (fd-ram) using hydro-economic based spatial models: a case of the state of Kelantan (under **Fundamental Research Grant Scheme**) - **As a co researcher, Approved Money RM 70,000**

Student Supervision (Post Graduate):

Student Name	Level	Thesis Title	Status
Arham Muchtar Achmad Bahar	Ph.D (Part time)	Determination of flood vulnerability level in Makasar, Indonesia	Going on
Zakia Ainul Kamal	Ph.D (Full Time)	Impact of seawater intrusion on groundwater quality in coastal aquifers of Kelantan, Malaysia, using hydrogeochemistry and stable isotopes	ongoing
Nor Ashikin Shaari	Master by research (Full time)	Flood causes and Factors affecting from geological aspects, Impact and mitigation in Kota Bharu, Kelantan	Graduated in 2016

Kishan Raj	Master by research (Full time)	Determination of Aquifer depth and source of contamination in groundwater in parts of Kelantan using silica thermometry and stable isotope analysis	Graduated in 2018
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Student Supervision (Under Graduate thesis):

Student Name	Thesis Title	Status
Hajarul Husna Moohd Noor	Landfill effect on hydrochemical characteristics of groundwater in kampong Beris Lalang, Bachok	Graduated
Ibrahim bin Ghazali	Impact of mining activities on the river quality at sungkai sokor and bertam river, kelantan	Graduated
Muhammad Syazwan	General Geology and petrography of sedimentary rocks in Ulu sokor, Kelantan	Graduated
Muhammad Ijaz bin Hassan	General Geology and classification of igneous rock in Bandar Jeli	Graduated
Nooraini binti Daud	Documentation of coastal erosion along pengkalan datu to kemasin using analysis remote sensing with GIS method	Graduated
Siti Nur Hanis binti Aflatun	Study of trace elements in groundwater samples in Kg Beris Lalang Bachok, Kelantan,	Graduated
Azalea Yasmin bt Yacoub	Hydrogeological and Hydrogeochemical studies of seasonal variation in the aquifer of Pengkalan cheap and kubangkiryen, kota baru	Graduated
Zatunnajihah binti mohd noor	General Geology Of Ulu Kusial, Tanah Merah And A Modified DRASTIC Model For Evaluating Groundwater Vulnerability In Parts Of Kota Bharu, Kelantan	Graduated
Fadli bin johari	The Impact Of Non-Point Source Pollution On Betis River In Kampung Lambok In Parts Of Gua Musang	Graduated
Muhammad azmi bin mohammad asri	General Geology and landslide susceptibility zonation of Limau Kasturi	Graduated
Lee Han Tiong	Geological mapping and major ion survey with silica analysis in and around kampong kakar, tanamerah	Graduated
Jesuneeta Allan A/P Aley looi,	Geological mapping and determination of silica content in shallow domestic well at gunong and parts of bachok	Graduated
Muhammad Nadzmi bin bdul ghafur	General Geology and surface investigation of groundwater potential zone using geological mapping and GIS at talaga Biji Aea, Tanamerah, Kelantan	Graduated

Amirul Faris B. Muhammad	Demarcation of groundwater potential zones in Ayer Lanas and Jedok Area, using GIS	Graduated
Kishan Raj	General Geology and Groundwater quality assessment in and around kampong Batu Gajah, Tanah Merah	Graduated
Shinthurathi Myandaran	General Geology, Hydrogeology & major ion concentration of groundwater in an around kg Jelewat, Gunong, Bachok	Graduated
Fatin Wahida bt Fadzli	Geological mapping and Determination of depth of of groundwater circulation in and around of UMK Jeli by using silica geothermometry	Graduated
Slocna A/P Thiruvalluvan	Geological mapping and Drinking water quality in Batu Malingtang, Jeli	Graduated
Ahmad Fkri bin Sarapan	Geological mapping and evaluation of groundwater chemistry in Jedok, Tanah Merah	Graduated
Siti Aisyah bt Razali	Geological mapping and geochemical studies of groundwater in and around Kampung Bardang, Jeli, Kelantan	Graduated
Ahmad Amirul Faez Bin Ahmad Nor Azmie	General Geology and major ion analysis of groundwater, in Kadok, Lower parts of Kota Bharu	Completed
Syazwani Izzati Riduwaan	General Geology & Delineation of Aquifer Zone in Batang Merbau, Tanah Merah	Completed
Muhammad Nazren Bin Mohd Tarmizi	General Geology & groundwater water level trends in domestic shallow wells in part of Tumpat, Kelantan	Completed
Nabilah binti Mohamad Zulkifli	General Geology & Delineation of Aquifer Zone in Felda Kemahang, Tanah Merah	Completed
Nur Ain Wahida Binti Shahr Shahaimi	General Geology & Delineation of Aquifer Zone in Kampung Asahan Hulu, Tanah Merah	Completed
Ranjini a/p Somasundram	General Geology & Physio chemical Analysis of Groundwater around Peringat, Kelantan	Completed
Mohd Syafiz Bin Mat Desa	General Geology & groundwater water level trends in domestic shallow wells in part of Bachok, Kelantan	Completed
Priamalar a/p Genason	General Geology & Groundwater Quality Around Kampung Gunong Timor, Bachok, Kelantan	Completed
Siti Nabilah Bt Che Arifin	General Geology & Depth Determination of groundwater Circulation in Jeli Hot Spring using silica geothermometry	Completed
Nik Nor Ashikin bt Supie	General Geology & Depth Determination of groundwater Circulation in Tok Boh Hot Spring using silica geothermometry	Completed
Ainaa Syamimi bt Yahaya	General Geology & Trace Element Distribution in Mentuan areas, parts of Bachok	Completed

Nur Ainaa by Azlan	General Geology and Determination of Groundwater Quality in Ketereh area, Kelantan	Completed
Siti Aeisyah bt Suhimi	General Geology and groundwater Water Quality of domestic shallow wells in parts of Pasir Mas Kelantan	Completed
Daniel tan chih sheng,	General geology and groundwater water quality assessment in and around panji, Kota Bharu, Kelantan	Completed
Nur Diyana Anis Binti Md Suhaimin	Geology and Evaluation of sea water intrusion into shallow aquifers using hydrochemistry in Tumpat, Kelantan	Completed
Solehah Binti Abd.Rahman	Saline water intrusion studies with a brief geological outline in coastal aquifers of Pengkalan Kubur area, Kelantan	Completed
Nur Aqilah Binti Yusri	Geological and groundwater quality studies in domestic Wells of Wakaf Bharu, Kelantan	Completed
Noor Syahila Binti Md Salleh	Geology and hydrochemistry of shallow aquifers at Kubang Gadong, Pasir Mas, Kelantan	Completed
Nabeelah Binti Ahmad Husni	Geological and major ion analytical studies of groundwater in Pasir Mas, Kelantan	Completed
Nurul Suhada Binti Mhd Sukri	Geology and Determination of Physiochemical parameters of shallow groundwater in Kangkong, Pasir Mas, Kelantan	Completed

Details of Research Experience during PDF and PhD:

Post-Doctoral Fellow in University Sain Malaysia (USM), on the project entitled “Development of a Quantitative Risk Assessment Model for Land slide in Malaysia” from October 2009 to May 2011. Real time monitoring of soil movement using real time inclinometer, Monitoring water level data hourly, established relationship between water levels and soil movement.

Five years experience of carrying field work in connection with my M. Phil, Ph.D degrees and project work. The field work necessarily encompasses three major disciplines;

A. Hydrogeological Studies:

The field surveys for hydrological studies consists of the following:

Established water level monitoring network and water quality monitoring

Repeated water level monitoring in wells

GPS survey were conducted to establish monitoring wells and to know the elevations of monitoring point.

Determining sample locations using GPS and recording of reduced level values using surveying techniques of connecting sampling sites to triangulation points

Measurements on water levels in dug wells before and after large withdrawal from adjoining tube wells (interference tests)

Carried out well inventory of existing wells to calculate accurate water balance

Discharge measurements in rivers and streams at various sites for use in calculating the interaction between surface and ground water regimes

Carried out grain size analysis of aquifer samples to determine aquifer properties
Constant and falling head permeameter were used to determine the hydraulic conductivity of aquifer samples collected from the field
Carried out pumping test to know the aquifer parameters
Sound Knowledge of groundwater modeling using software Modflow Pro 4.1
These sets of data have been used in preparing water-level maps, water-level fluctuation maps.

B. Hydrogeochemical Studies:

Field input for these studies consists of the following:

Collection of samples from all sources, that is, surface water, dug wells, tube wells and stagnant bodies

Collection of groundwater sampling for major ions, trace element and bacteriological analyses

Determination of some parameters, such as, pH, specific conductance, total dissolved solids and salinity on the site

Lab work carried out water analyses for major ion, fully familiar with analyses techniques and instrumentations.

Data generated were analysed using softwares Aqua Chem, Grapher, Surfer, Didger, Photoshop, Corel DRAW etc.

Mapping Aquifer vulnerability zones

These samples have been collected using standard techniques as prescribed for collecting samples for the analyses of major cations and anions, trace elements and silica.

C. Geological Studies:

These studies include:

Geomorphological studies

Quaternary geology study on river-bed sections, terraces and sections exposed in positive land features

Study of borehole logs

Attempting correlation of different units based on surface and subsurface data

This data has been used in preparing cross-sections and fence-diagrams for understanding the geological and lithological control on hydrological conditions in the areas of study.

Worked on Projects:

- Worked as a Post-Doctoral Fellow in University Sain Malaysia (USM) Malaysia, from October 2009 to April 2011, on the project entitled "Development of a Quantitative Risk Assessment Model for L and slide in Malaysia".
- Worked as Senior Research Fellow under the Council of Scientific and Industrial Research (CSIR), Government of India, from October 2008 to February 2009. The work involved on "*Sustainability of Groundwater System in parts of Krishna-Hindon interstreamn Western Uttar Pradesh: A Quantitative and Qualitative Assessment*".
- Worked as Junior Research Fellow at the Aligarh Muslim University, Aligarh, India from October 2005 to September 2008. The work involved on "*Sustainability of Groundwater System in parts of Krishna-Hindon interstreamn Western Uttar Pradesh: A Quantitative and Qualitative Assessment*".

- Worked as Senior Research Fellow on the project under the Ministry of Water Resources, Government of India from October 2005 to September 2006 entitled “*Groundwater flow modeling and aquifer vulnerability assessment studies in Yamuna- Krishna sub basin in Muzaffarnagar District, UP, India*”.
- Worked as Junior Research Fellow in the Aligarh Muslim University, Aligarh, India from September 2003 to May 2005. The work involved on “*Hydrogeology and Groundwater quality characteristics of the Kali-Hindon sub-basin, in parts of western U.P.*”.

Presented Oral Paper in Conferences:

1. 14th UMT International Annual Symposium (UMTAS 2019), Primula Beach Hotel, Terengganu, Malaysia, **23 – 25 July 2019**.
2. 4th GoGreen Summit, Holiday Inn Express, Kuala Lumpur, Malaysia, **29 – 30 December 2018**
3. Research & Innovation Seminar, Universiti Malaysia Kelantan, Kota Bharu Malaysia, **3 – 5 December 2018**
4. 8th International Conference of the Regional Network on Poverty Eradication (RENPER), San Beda University, Manila, Philippines, **24 – 25 October 2018**.
5. 1st International Congress on Earth Sciences in SE Asia, University Brunei Darussalam, **15-18 November 2017**
6. National Geoscience Conference & Exhibition (NGC 2017), Organized by Geological Society of Malaysia, Hotel Istana Kuala Lumpur, **9-10 October 2017**
7. 3rd Annual International Conference on Geology :A Panel on Application of Isotope Hydrology Techniques in Assessing Water Resources Athens, Greece, **5-8 June 2017**
8. Research & Innovation Seminar, Universiti Malaysia Kelantan, Kota Bharu Malaysia, **20-21 August 2016**
9. 7th International Seminar of Regional Network on Poverty Eradication (RENPER 7), Held at Bangladesh Agriculture University, Mymensingh Bangladesh, **13-15 November 2016**
10. International Water Conference 2016 on Water Resources in Arid Areas: The way Forward, Sultan Qabus University, Muscat Oman, **13-16 March 2016**
11. National Geoscience Conference (NGC 2015) organized by Geological society of Malaysia , Universiti Malaysia Kelantan, JMG and PMBK, at Perdana Hotel, Kota Bharu Kelantan – **31 July -01 August 2015**
12. XIII International Conference on Geomorphology (ICG 15)-, organized by World Academy of Science and Engineering and Technology held on Riverview Hotel, Singapore from **8- 9 January 2015**
13. GEOSEA 2014 Thirteen Regional congress (International Conference) on Geology, Mineral Resources and Energy Resources of Southeast Asia, at Sedona Hotel Yangon, Myanmar, organize by Myanmar Geosciences Society (MGS) , **10-11 March 2014**
14. National Workshop on Groundwater Governance and Regulation , organized by Indian National committee of International Association of Hydrogeologists, **23, August, 2014, New Delhi, India**
15. Kolokium Penyelidikan UMK 2014. 22 – 23December 2014. Grand River View Hotel, Kota Bharu, Kelantan, **22 – 23December 2014**
16. National Geoscience Conference (NGC 2013) organize by Geological Society of Malaysia and Universiti Tecknologi Petronas, at Kinta river valley, Ipoh – **8-9 June 2013**
17. Joint seminar between UMK and IAINRY (Indonesia) on natural disaster experiences in Malaysia and Indonesia, UMK Jeli, 30th and 31st May, **2013**
18. 2nd international conference on water resources (ICWR2012) in conjunction with 20th unesco-ihp regional steering committee meeting for southeast asia and the pacific, organized by UTM, **5-6 November 2012**, Langkawi.
19. Conference on Quaternary Geological Process: Natural Hazard & climate change, organized by Centre of Advance Study in Geology, University of Lucknow, Lucknow, India, **25- 26 February, 2009**.

Published Abstract in conference proceedings as a main author and co-author (Since 2013 - 2018)

20. Identifying groundwater potential zones in umk jeli campus using electrical resistivity methods (14th UMT International Annual Symposium (UMTAS 2019), Primula Beach Hotel, Terengganu, Malaysia, **23 – 25 July 2019.**)
1. Investigation of quality characteristics of groundwater in northern Kelantan, Malaysia (4th GoGreen Summit, Holiday Inn Express, Kuala Lumpur, Malaysia, 29 – 30 December 2018)
2. Identifying groundwater potential in the UMK Jeli campus area using geological and geophysical survey (Research & Innovation Seminar, Universiti Malaysia Kelantan, Kota Bharu Malaysia, 3 – 5 December 2018)
3. Hard rock and groundwater quality of domestic wells in Batu Melintang area, Jeli Malaysia (15th Regional congress on geology, mineral and energy resources of southeast asia (GEOSEA), 16 -17 October 2018, Hanoi Veitnam.
4. Sustainable use of Groundwater: A Case Study from Batu Melintang Area Jeli, Malaysia (8th International Conference of the Regional Network on Poverty Eradication (RENPER), San Beda University, Manila, Philippines, 24 – 25 October 2018.)
5. Seasonal Trace elements concentrations in shallow well of Northern parts of Kelantan (1st International Congress on Earth Sciences in SE Asia, University Brunei Darussalam, 15-18 November 2017)
6. Carboniferous Plant Fossils in Teluk Kalung, Kemaman, Terranganu (National Geoscience Conference & Exhibition (NGC 2017), Organized by Geological Society of Malaysia, Hotel Istana Kuala Lumpur, 9-10 October 2017)
7. Evaluating the suitability of groundwater for irrigational purposes in some parts of Kelantan, Malaysia (National Geoscience Conference & Exhibition (NGC 2017), Organized by Geological Society of Malaysia, Hotel Istana Kuala Lumpur, 9-10 October 2017)
8. Isotope Studies on Mechanisms of Groundwater Recharge in parts of Kelantan Malaysia (3rd Annual International Conference on Geology :A Panel on Application of Isotope Hydrology Techniques in Assessing Water Resources Athens, Greece, 5-8 June 2017)
9. Significance of silica analysis in groundwater studies of domestic shallow wells in parts of jeli district, kelantan, Malaysia (International Water Conference 2016 on Water Resources in Arid Areas: The way Forward, Sultan Qabus University, Muscat Oman, 13-16 March 2016)
10. Geological Assessment of Water-Based Tourism In Jeli District, Kelantan, Malaysia (International Water Conference 2016 on Water Resources in Arid Areas: The way Forward, Sultan Qabus University, Muscat Oman, 13-16 March 2016)
11. Groundwater quality of Shallow dugwells in parts of Tanamerah District, Malaysia (International Water Conference 2016 on Water Resources in Arid Areas: The way Forward, Sultan Qabus University, Muscat Oman, 13-16 March 2016)
12. Distribution Of Trace Elements In Groundwater Around Beris Lalang Landfill Bachok, Kelantan, Malaysia (International Water Conference 2016 On Water Resources In Arid Areas: The Way Forward, Sultan Qabus University, Muscat Oman, 13-16 March 2016)
13. Study Of Coastal Changes From Kuala Besar To Kuala Sungai Pengkalan Datu, Kelantan, Malaysia Using Gis
14. Assessment Of Groundwater Suitability For Irrigation Purpose: A Case Study In The Kelantan State (7th International Seminar of Regional Network on Poverty Eradication (RENPER 7), Held at Bangladesh Agriculture University, Mymensingh Bangladesh, **13-15 November 2016**)
15. Assessment Of Groundwater quality Index In Parts Of Tanamerah District, Kelantan, Malaysia (National Geoscience Conference 2016, Held At Ms Garden Hotel, Kuantan, 14-15 November)
16. Impact Of Sand Mining On Well Water Table Depletion And Its Socio-Economic Implication To The Communities Along Kelantan River (National Geoscience Conference 2015, 31 July-01 August 2015, Perdana Hotel, Kota Bharu, Kelantan, Malaysia)
17. A New Inventory Of Geoheritage Resources Of Labuan Island (National Geoscience Conference 2015, 31 July-01 August 2015, Perdana Hotel, Kota Bharu, Kelantan, Malaysia)
18. Multiple Uses Of Silica Analysis In Hydrogeological And Hydrochemical Studies In Parts Of Jeli District, Kelantan, Malaysia (National Geoscience Conference 2015, 31 July-01 August 2015, Perdana Hotel, Kota Bharu, Kelantan, Malaysia)
19. Geochemistry and Provenance of Sedimentary Rocks at Sentong, Lojing, Gua Musang, Kelantan (National Geoscience Conference 2015, 31 July-01 August 2015, Perdana Hotel, Kota Bharu, Kelantan, Malaysia)
20. Delineation Of Groundwater Potential Zones Using Surface Indicators: A Case Study From Telaga Bijih And Ayer Lanas Area, Tanah Merah, Kelantan (National Geoscience Conference 2015, 31 July-01 August 2015, Perdana Hotel, Kota Bharu, Kelantan, Malaysia)
21. Using Geographical Information System to Estimate Vulnerable Urban Settlements to Flood Hazard in Kota Bharu (National Geoscience Conference 2015, 31 July-01 August 2015, Perdana Hotel, Kota Bharu, Kelantan, Malaysia)

22. Flood-Induced River Disruption: Geomorphic Imprints and Topographic Effects in Kelantan River Catchment from Kemubu to Kuala Besar, Kelantan, Malaysia, XIII International Conference on Geomorphology (ICG 15)-, organized by World Academy of Science and Engineering and Technology held on Riverview Hotel, Singapore from 8- 9 January 2015
23. Impact Assessment of Beris Lalang Landfill on Groundwater Quality, Bachok district, Kelantan, Malaysia, (GEOSEA 2014, Geomyanmar 2014, Thirteen Regional congress (International Conference) on Geology, Mineral Resources and Energy Resources of Southeast Asia, at Sedona Hotel Yangon, Myanmar, organize by Myanmar Geosciences Society (MGS), 10-11 March 2014).
24. Methods to assess shallow aquifer's sustainability and pertained socio- economic issues in central ganga plain, India National Workshop on Groundwater Governance and Regulation , organized by Indian National committee of International Association of Hydrogeologists, 23, August, 2014
25. Flood Causes From Geological Aspect, Impact and Mitigation in Kota Bharu, Kelantan, Colloquium Penyelidikan UMK 2014. 22 – 23December 2014. Grand River View Hotel, Kota Bharu, Kelantan, 22 – 23December 2014
26. Geoheritage as the basis for geotourism Development- a case study in Jeli district, Kelantan, Malaysia, (GEOSEA 2014, Geomyanmar 2014, Thirteen Regional congress (International Conference) on Geology, Mineral Resources and Energy Resources of Southeast Asia, at Sedona Hotel Yangon, Myanmar, organize by Myanmar Geosciences Society (MGS), 10-11 March 2014)
27. Sedimentology and petrography of the setap shale formation, Labuan island, Malaysia, (GEOSEA 2014, Geomyanmar 2014, Thirteen Regional congress (International Conference) on Geology, Mineral Resources and Energy Resources of Southeast Asia, at Sedona Hotel Yangon, Myanmar, organize by Myanmar Geosciences Society (MGS), 10-11 March 2014
28. Infiltration rate assessment of some major soil types in kota bharu, Kelantan, Malaysia, (National Geoscience Conference , 8-9 June 2013 at Ipoh, Malaysia).
29. Geoheritage of Lata Renyok Cascade: A potential Geotourism Development in Jeli Distrit, Kelantan, (National Geoscience Conference , 8-9 June 2013 at Ipoh, Malaysia).
30. Geoheritage and Geotourism Potential of Gunung Reng and its surroundings, Jeli districts, Kelantan, (National Geoscience Conference , 8-9 June 2013 at Ipoh, Malaysia).
31. Geotourism potential of Jeli hot spring, Kelantan, (National Geoscience Conference, 8-9 June 2013 at Ipoh, Malaysia).
32. Geoheritage conservation of paleontological sites in aring area, Gua Musang district, Kelantan, (8th Malaysia Geoheritage conference & 6th Indonesia – Malaysia Geoheritage conference, 5-7 October 2013, Kuantan, Pahang, Malaysia).
33. Geoheritage resources and Geotourism potential of gunung Reng and its surrounding, Jeli district, Kelantan, (8th Malaysia Geoheritage conference & 6th Indonesia – Malaysia Geoheritage conference, 5-7 October 2013, Kuantan, Pahang, Malaysia).
34. Utilizing satellite remote sensing to monitor water quality, (Joint Seminar on Natural Disasters Experiences in Malaysia and Indonesia 2013 between UMK and IAIN Ar- Raniry Aceh, 30-31st May 2013, UMK Jeli).
35. A statistical analysis of flood impact assessment in kota bharu, Malaysia, (Joint Seminar on Natural Disasters Experiences in Malaysia and Indonesia 2013 between UMK and IAIN Ar- Raniry Aceh, 30-31st May 2013, UMK Jeli).
36. Preliminary study on potential of pumice as the new material for floating devices and buoy products, (Geos 2013, October 28-29 2013, Phuket, Thailand).
37. Evaluation of insecticidal activity of three formulation of insecticide Aerosol Sprays Against Lab bred Aedes albopictus, (World congress on pharmaceutical Sciences & Chemical Technology, 16-18 December, 2013, Colombo, Srilanka)

Reviewer of indexed journal

- Italian Journal of Geoscience
- Arabian Journal of Geoscience
- Scientific Research Essays
- Journal of Geographic Information System (JGIS)
- British Journal of Applied science & Technology
- Irrigation and Drainage
- Soil Research
- Journal Fizik Malaysia

- Malaysian Journal of Analytical Sciences
- Indonesian Journal of Geosciences
- Many other index journals

Editor of journals

- The International Journals of Engineering and Sciences (IJENS)
- Journal of Tropical. Resources and Sustainable Science
- Malaysian Journal of Geosciences

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Memberships:

- International Association of Hydrogeologist (IAH), Membership No: 132655
- International Association of Hydrological Sciences (IAHS), Membership No:11559.
- Geological Society of Malaysia. Membership No:33477
- Institute of Geology Malaysia, Membership No: 685
- Malaysian Nature Society (MNS), Membership No: O/E/30899/D

Achievements/ Awards:

- Anugerah Gemilang in Research category UMK (AGU) 2016
- Excellence Service Award UMK (APC) 2014
- Award Senarai Jurnal Hadiah Sanjungan 2010, Publication (Journal), Category, Universiti Sains Malaysia, Penang, Malaysia.
- Senior Research Fellow, CSIR, India

Other tasks during current appointment

- Appointed as Chairman of National Geoscience conference 2015, held in Kota Bharu, Kelantan, Malaysia
- Committee member for international training on environmental risk management and sustainability of modern mining/ metallurgical industries from 17 – 29 April 2013.
- Head, committee (technical) in the joint seminar on Natural disasters: Experiences in Malaysia and Indonesia from 30-31 May 2013
- Advisor of Exploration club of University Malaysia Kelantan (UMK).
- Member of Research and Innovation Committee, Campus Jeli, Universiti Malaysia Kelantan (UMK)
- Member of Research Cluster of Geology and Applied Geology in Faculty of Earth Science, UMK
- Appointed as a chairman of the postgraduate colloquium January 2013
- Given lecture to students on knowledge acculturation program entitled “**Importance of Groundwater**” as a speaker.
- Research and collaboration responsibilities of Geoscience program with the MOU Universities.
- Giving counselling around 36 students as a academic adviser

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References:

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