

CURRICULUM VITAE



| A. BUTIR-BUTIR PERIBADI (Personal Details) | | | |
|--|-----------------------------|------------------------------|---------------------------------|
| Nama Penuh (Full Name) | ZULFA HANAN ASH'AARI | | Gelaran (Title): GS. DR. |
| No. MyKad / No. Pasport (Mykad No. / Passport No.) | Warganegara (Citizenship) | Bangsa (Race) | Jantina (Gender) |
| - | MALAYSIA | MELAYU | PEREMPUAN |
| Jawatan (Designation) | PENSYARAH KANAN | Tarikh Lahir (Date of Birth) | 20 MAC 1985 |

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| Alamat Semasa (Current Address) | Jabatan/Fakulti (Department/Faculty) | E-mel dan URL (E-mail Address and URL) |
| JABATAN ALAM SEKITAR, FAKULTI PERHUTANAN DAN ALAM SEKITAR, UNIVERSITI PUTRA MALAYSIA 43000 UPM SERDANG, SELANGOR MALAYSIA | JABATAN ALAM SEKITAR, FAKULTI PERHUTANAN DAN ALAM SEKITAR, UNIVERSITI PUTRA MALAYSIA 43000 UPM SERDANG, SELANGOR MALAYSIA | zulfa@upm.edu.my |

| B. KELAYAKAN AKADEMIK (Academic Qualification) | | | |
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| Nama Sijil / Kelayakan (Certificate / Qualification obtained) | Nama Sekolah Institusi (Name of School / Institution) | Tahun (Year obtained) | Bidang pengkhususan (Area of Specialization) |
| Ph.D | School of Geography, University of Sheffield, UK | 2013 | Climatology, GIS, Remote Sensing |
| Bachelor | Fakulti Sains Komputer dan Teknologi Maklumat, Universiti Putra Malaysia | 2007 | Software Engineering |

| C. KEMAHIRAN BAHASA (Language Proficiency) | | | | | |
|---|----------------|------------------------|---------------|-------------------------|-------------------------|
| Bahasa / Language | Lemah Poor (1) | Sederhana Moderate (2) | Baik Good (3) | Amat Baik Very good (4) | Cemerlang Excellent (5) |
| English | | | | | / |
| Bahasa Melayu | | | | | / |
| Chinese | | | | | |
| Lain-lain (other): | | | | | |

| D. PENGALAMAN SAINTIFIK DAN PENGKHUSUSAN (Scientific experience and Specialization) | | | | |
|---|---------------------|-------------------|-----------------|------------------------|
| <i>Organization</i> | <i>Position</i> | <i>Start Date</i> | <i>End Date</i> | <i>Expertise</i> |
| MOSTI | Subject Expert | 2021 | 2023 | GIS |
| Jabatan Alam Sekitar | Subject Expert | 2021 | 2022 | Statistics |
| Institution of Geospatial and Remote Sensing Malaysia (IGRSM) | Professional Member | Nov 2020 | | GIS, Remote Sensing |
| Canadian Remote Sensing Society | Professional Member | June 2021 | | Remote Sensing |
| Malaysian Clean Air Society (MyCAS) | Vice President | July 2021 | Dec 2023 | Air Quality Technology |
| Japan Aerospace Exploration Agency (JAXA), the National Institute for Environmental Studies (NIES), and the Ministry of the Environment (MOE) | Researcher | April 2016 | March 2019 | Greenhouse Gases |
| SEARCA | Subject Expert | 2018 | 2021 | Climate Change |
| University Gadjadara | Subject Expert | 2018 | 2018 | Air Pollution |
| Pusat Sumber dan Pendidikan Kanser (CARE) | Research Associate | 2015 | 2015 | Air pollution |
| Environment Institute of Malaysia (EiMAS) | Subject Expert | 2018 | 2018 | Statistics |
| INTROP | Research Associate | 2018 | 2018 | GIS, Remote Sensing |

| E. PEKERJAAN (Employment) | | | | |
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| <i>Majikan / Employer</i> | <i>Jawatan / Designation</i> | <i>Jabatan / Department</i> | <i>Tarikh lantikan / Start Date</i> | <i>Tarikh tamat / Date Ended</i> |
| UPM | Tutor | Jabatan Sains Alam Sekitar, FPAS | July 2017 | Feb 2013 |
| UPM | Pensyarah Kanan | Jabatan Alam Sekitar, FHAS | March 2013 | Kini |

| F. ANUGERAH DAN HADIAH (Honours and Awards) | | | | |
|--|--|---|-------------------|-------------|
| <i>Name of awards</i> | <i>Title</i> | <i>Award Authority</i> | <i>Award Type</i> | <i>Year</i> |
| Academic Awards | Excellent Service Award | UPM | University | 2017 & 2022 |
| | Gold Medal at the Putra Innocreative Poster Competition | UPM | International | 2023 |
| | Silver PICTL: Putra InnoCreative in Teaching and Learning Carnival | UPM | International | 2019 |
| | Finalis Anugerah Akademik Muda | UPM | University | 2018 |
| | SLAI Scholarship for Doctorate (Ph.D.) program | MoHE | National | 2007 |
| | Excellent Service Certificate | UPM | University | 2014-2023 |
| | Travel Award – Dana Keterlihatan dan Pengantarabangsaan Pejabat TNCPI UPM to AORI, University of Tokyo | UPM | University | 2017 |
| | Research Award - GOSAT 10th RA | Japan Aerospace Exploration Agency (JAXA), the National Institute for | International | 2016 |

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| | | Environmental Studies (NIES), and the Ministry of the Environment (MOE) | | |
| | Travel Grant - GIScience for Civil Protection Management in Southeast Asia | ASEA Uninet, Austria | International | 2015 |

G. SENARAI PENERBITAN (Sila masukan nama pengarang, tajuk, nama jurnal, jilid, muka surat dan tahun diterbitkan) (List of publications – author (s), title, journal, volume, page and year published)

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|----------------|---|
| <i>Journal</i> | <ol style="list-style-type: none"> 1. Mohamad, Suzani, Zulfa Hanan Ash'aari*, Mohammad Firuz Ramli, Ramdzani Abdullah, and Balqis Mohamed Rehan. "Application Of A Hybrid Cellular Automaton-Markov Model In Land Use Change Detection And Prediction In Flood-Prone Area, Johor, Malaysia." <i>Planning Malaysia</i> 21 (2023). 2. Ibrahim, B. & Ash'aari Z.H* (2023). Climate Variability in Relation to Land Use and Land Cover (LULC) Changes in Kota Bhari, Kelantan, Malaysia. <i>Planning Malaysia</i> 21(5), 1-16. 3. Rosli, M.A.M & Ash'aari, Z.H.* (2023). Analysis of trends in extreme temperature indices over selected areas in Peninsular Malaysia from 1990-2020. <i>IOP Conf. Series: Earth and Environmental Science</i> 1167(2023)0120058. 4. Fatima, S., Ash'aari, Z. H.*, Ramli, M. F., Sharaai, A. H., & Chaudhry, M. N. (2023). Selection of sanitary landfill site by integrated fuzzy AHP and GIS for Multan, Pakistan. <i>World Review of Science, Technology and Sustainable Development</i>, 19(1-2), 149-169. 5. Hettige, N. D., Hashim, R., Kutty, A. A., & Ashaari, Z. H.* (2023). A New Model for Organic Contamination Assessments Using Benthic Macroinvertebrates as Biological Indicators. <i>Turkish Journal of Fisheries and Aquatic Sciences</i>, 23(8). 6. Saifuddin, M. F. U., Ash'aari, Z. H.*, Aris, A. Z., & Diyana, Z. (2022). GIS-based risk assessment of tropical surface water pollution by integrating hydrogeological and anthropogenic parameters. <i>Human and Ecological Risk Assessment: An International Journal</i>, 1-28 (Q1). 7. Alrteimei, H. A., Ash'aari, Z. H.*, & Muharram, F. M. (2022). Last Decade Assessment of the Impacts of Regional Climate Change on Crop Yield Variations in the Mediterranean Region. <i>Agriculture</i>, 12(11), 1787 (Q1). 8. Abdulsalam, A., Ramli, M. F., Jamil, N. R., Ashaari, Z. H., & Umar, D. U. A. (2022). Hydrochemical characteristics and identification of groundwater pollution sources in tropical savanna. <i>Environmental Science and Pollution Research</i>, 29(25), 37384-37398 (Q1). 9. Hettige, N. D., Hashim, R., Kutty, A. A., Ash'aari, Z. H., & Jamil, N. R. (2022). Using Benthic Macroinvertebrate Distribution and Water Quality as Organic Pollution Indicators for Fish Farming Areas in Rawang Sub-basin, Selangor River, Malaysia: A Correlation Analysis. <i>Journal of Fisheries and Environment</i>, 46(1), 180-197. 10. N.I. Ahmad Kamal, Ash'aari, Z.H.*, Abdullah, A.M., Mohd Kusin, F., Mohamat Yusuff, F., Sharaai, A.M., Muharram, F.M., Mohd Ariffin, N.A. (2021). Extreme heat vulnerability assessment in tropical region: A case study in Malaysia. <i>Climate and Development</i>, 1-15 (Q1). 11. M.F. Umar Saifudin, Ash'aari, Z.H.*, Aris, A.Z. Mohamad Ramli, M.F. (2021). A Hybrid GIS and Knowledge Driven Approach for Water Resources Potential Zonation. <i>International Journal of GEOMATE</i> 21 (83), 56-64. 12. Samra Fatima, Zulfa Hanan Ash'aari*, Mohammad Firuz Ramli, Amir Hamzah Sharaai, Muhammad Nawaz Chaudhry (2021). GIS-Based tools for optimizing municipal solid waste collection and transportation routes. <i>International Journal of Environment and Waste Management</i>. 10.1504/ijewm.2022.10039859. 13. Samra Fatima, Zulfa Hanan Ash'aari*, Mohammad Firuz Ramli, Amir Hamzah Sharaai, Muhammad Nawaz Chaudhry (2021). Comparison of Landfill Site Suitability Assessment using AHP and Fuzzy AHP Methods. <i>The Journal of Solid Waste Technology and Management</i>. 14. Joni, AAM, Mohamar-Yusuff, F., Noor NAM., Mohamed, K.N. Ash'aari, Z.H., Kusin, FM, Zulkeflee, Z., Zulkifli, SZ, Ismail, A., Arshad, A (2021). Baseline distribution and sources of selected agricultural runoff in the bottom water of |
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an active cockle farming area, Bagan Pasir, Perak, Malaysia. *Marine Pollution Bulletin*, 167, 112276.

15. Syed Hasan, S.N.M.; Mohd Kusin, F.; Nik Daud, N.N.; Saadon, M.A.; Mohamat-Yusuff, F.; **Ash'aari, Z.H.** (2021). Characterization of Gold Mining Waste for Carbon Sequestration and Utilization as Supplementary Cementitious Material. *Processes*, 9, 1384. <https://doi.org/10.3390/pr9081384>.
16. Malik, N.K.A., Manaf, L.A., Jamil, N.R., Rosli, M.H., **Ash'aari, Z.H.**, Othman, M.A. (2021) Influence of hydrological runoff and catchment characteristics on accumulation floatable litter load in gross pollutant trap (GPT). *J Mater Cycles Waste Manag* 23, 1289–1302. <https://doi.org/10.1007/s10163-021-01205-8>.
17. Ezani, E., Brimblecombe, P., **Hanan Asha'ari, Z.**, Fazil, A.A., Syed Ismail, S.N., Ahmad Ramly, Z.T., Khan, M.F. (2021). Indoor and Outdoor Exposure to PM2.5 during COVID-19 Lockdown in Suburban Malaysia. *Aerosol Air Qual. Res.* 21, 200476. <https://doi.org/10.4209/aaqr.2020.07.0476>.
18. Harun, Hazimah H., Mohamad R.M. Kasim, Siti Nurhidayu, **Zulfa H. Ash'aari**, Faradiella M. Kusin, and Muhammad K.A. Karim (2021). Association of Physicochemical Characteristics, Aggregate Indices, Major Ions, and Trace Elements in Developing Groundwater Quality Index (GWQI) in Agricultural Area. *International Journal of Environmental Research and Public Health* 18, no. 9: 4562. <https://doi.org/10.3390/ijerph18094562>.
19. Harun, H.H., Mohamad Roslan, M.K., Nurhidayu, S., **Ash'aari, Z.H.** Kusin, F.M. (2021) Physicochemical analysis of groundwater and suitability for domestic utilization in Kuala Langat, Selangor. *IOP Conf. Ser.: Earth Environ. Sci.* 646 012025.
20. **Ash'aari, Z.H.***, Aris, A.Z., Ezani, E., Kamal, N.I.A., Jaafar, N., Jahaya, J.N., Manan, S.A., Saifuddin, M.F.U. (2020). Spatiotemporal variations and contributing factors of air pollutant concentrations in Malaysia during movement control order due to pandemic COVID-19. *Aerosols and Air Quality Research*, 20, 10, 2047-2061 (Q2).
21. Mohamat-Yusuff, F., Zulkarnain, Z., Anuar, N.Z.A., Joni, A.A.M., Kusin, F.M., Mohamed, K.N., Zulkeflee, **Z.**, **Asha'ari**, Z.H., Zulkifli, S.Z., Arshad, A., Ismail, A. (2020). Impact of Diuron contamination on blood cockles (*Tegillarca granosa* Linnaeus, 1758). *Marine Pollution Bulletin*, 161, 111698 (Q1).
22. Nur Diyana Mohamad, **Zulfa Hanan Ash'aari***, Nurfatin Izzati Ahmad Kamal (2020). Water Demand Estimation Based on Land Use In Urban City. *International Journal of Scientific and Technology Research*, 9,6, 545-550 (SCOPUS).
23. Malik, N.K.A., Manaf, L.A., Jamil, N.R., Rosli, M.H., **Ash'aari, Z.H.**, Adhar, A.S.M. (2020). Variation of floatable litter load and its compositions captured at floating debris boom (FDB) structure. *Journal of Material Cycles and Waste Management*, 22, 6, 1744-1767 (Q3).
24. Hashim, N.H., Mohamat-Yusuff, F., Joni, A.A., Kusin, F.M., Mohamed, K.N., Zulkeflee, **Z.**, **Asha'ari**, Z.H., Zulkifli, S.Z. (2020). Determination of median lethal concentration (LC50) and nitrite accumulation in the blood and tissue of blood cockle (*Tegillarca granosa*, Linnaeus 1758). *Water*, 12, 8, 2197 (Q2).
25. Nurfatin Izzati Ahmad Kamal, **Zulfa Hanan Ash'aari***, Ahmad Makmom Abdullah (2019). Spatio-temporal variability of heat exposure in Peninsular Malaysia using land surface temperature. *Disaster Advances*, 12, 12.
26. MA Othman, **ZH Ash'aari***, AZ Aris, MF Ramli (2019). Tropical deforestation monitoring using NDVI from MODIS satellite: a case study in Pahang, Malaysia. *Earth and Environmental Science* 169 (1), 012050 (SCOPUS).
27. MA Othman, **ZH Ash'aari***, AZ Aris, MF Ramli (2019). Forest degradation analysis using geospatial techniques approach in Tropical Region of Pahang Malaysia. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, 42 (SCOPUS).
28. NH Othman, **ZH Ash'aari***, FM Muharram, MA Othman, M Othman (2019) Temporal and spatial distribution of the mid-tropospheric CO₂ concentrations in Malaysia. *Earth and Environmental Science* 373 (1), 012011 (SCOPUS).
29. Ali Ahmed Ben Youssef, K., Makmom Abdullah, A., Zulhaidi Mohd Shafri, H., **Hanan Ashaari, Z.** (2019). The development of Air Quality Indices using AOD-Retrieved Images during haze events in Peninsular Malaysia. *IOP Conference Series: Earth and Environmental Science*, 373, (1), 012027 (SCOPUS).
30. Nur Diyana Mohamad, **Zulfa Hanan Ash'aari***, Ahmad Makmom Abdullah,

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| | <p>Faradiella Mohd Kusin and Noor Zaitun Yahaya (2018). Preliminary analysis of traffic related pollutants measurements in different Petaling Jaya Streets. <i>EnvironmentAsia</i>, 11, 2. (SCOPUS)</p> <p>31. Rasheida E. Elhadi, Ahmad Makmom Abdullah, Ahmad Makmom Abdullah, Abdul Halim Abdullah, Md Firoz Khan, Zulfa Hanan Ashaari (2018). Seasonal Variations of Atmospheric Particulate Matter and its Content of Heavy Metals in Klang Valley, Malaysia. <i>Aerosol and Air Quality Research</i>.</p> <p>32. Maher M Aburas, Sabrina HO Abdullah, Mohammad F Ramli, Zulfa H Asha'ari (2017). Land suitability analysis of urban growth in Seremban Malaysia, using GIS based Analytical Hierarchy Process. <i>Procedia Engineering</i> 198 (2017) 1128 – 1136.</p> <p>33. Fathiah Alaswad, Ferdaus Mohamat-Yusuff, Roslan Ismail, Faradiella Mohd Kusin, Zulfa Hanan Ashaari, Khairiah J (2017) Spatial distribution of carbon and nitrogen stable isotope in soil of oil palm plantation. <i>Advances in Environmental Biology</i>, 11, 16-25.</p> <p>34. Rasheida E. Elhadi, Ahmad Makmom Abdullah, Abdul Halim Abdullah, Zulfa Hanan Ash'aari, D.Y. Gumel, Fedel. M. Binyahmed (2016) Identification of heavy metals in particulate matter PM10 of Traffic Areas, Cheras, Malaysia. <i>Environment & Ecology</i> 34(4) 1731-1734.</p> <p>35. Maher Milad Aburas, YuekMing Ho, Mohammad Firuz Ramli, Zulfa Hanan Ashaari (2016) The Simulation and prediction of spatio-temporal urban growth trends using cellular automata models: A review. <i>International Journal of Applied Earth Observation and Geoinformation</i>, 52:380-389 (Q1)</p> <p>36. Hilal, Y.Y., Wan Ishak, W., Azmi Yahya, Zulfa H. Ash'aari (2016). An Artificial Neural Network with Stepwise Method for Modelling and Simulation of Oil Palm Productivity Based on Various Parameters in Sarawak (<i>in press</i>) (Q3)</p> <p>37. Othman, M., Ash'aari, Z.H., et al. (2016) Assessment of drought impacts on Vegetation Health: A Case study in Kedah. <i>IOP Conference Series Earth and Environmental Science</i> 37(1):012072.</p> <p>38. Khaled Ali Ahmed Ben Youssef, Ahmad Makmom Abdullah, Helmi Zuhaidi Mohd Shafri, Zulfa Hanan Ash'aari, Danladi Yusuf Gumel, Sara yasina Yusof (2016). Estimation of Aerosols dispersion & urban Air Quality evaluation over Malaysia using MODIS satellite, <i>International Journal of Advanced Scientific and Technical Research</i>, 6, 229-238.</p> <p>39. Maher M Aburas, Sabrina H Abdullah, Mohamad F Ramli, Zulfa H Ash'aari (2016). Landscape Analysis of Urban Growth Patterns in Seremban, Malaysia Using Spatio-Temporal Data. <i>IOP Conference Series Earth and Environmental Science</i> 37(1):012055</p> <p>40. Mohamad, N.D., Ash'aari, Z.H. and Melawani, O. (2015) Preliminary assessment of air pollutant sources identification at selected monitoring stations in Klang Valley, Malaysia. <i>Procedia of Environmental Sciences</i>, 30, 121-126.</p> <p>41. Melawani, O., Ash'aari, Z.H. and Mohamad, N.D. (2015) Long-term daily rainfall pattern recognition: Application of Principal component analysis. <i>Procedia of Environmental Sciences</i>, 30, 127-132.</p> <p>42. Sharif, S.M., Kusin, F.M., Asha'ari, Z.H., Aris, A.Z. (2015) Characterization of Water Quality Conditions in the Klang River Basin, Malaysia Using Self Organizing Map and K-means Algorithm. <i>Procedia of Environmental Sciences</i>, 30, 73-78.</p> <p>43. Akhir, N.I.M., Kusin, F.M., Mohamat-Yusuff, F., Awang, M., Ash'aari, Z.H (2015) Impact of nitrogen fertilizer application on nitrous oxide emission in oil palm plantation. <i>Procedia of Environmental Sciences</i>, 30, 315-319.</p> <p>44. Aburas, M.M., Abdullah, S.H., Ramli, M.F., Ash'aari, Z.H. (2015) Measuring Land Cover Change in Seremban, Malaysia Using NDVI Index. <i>Procedia of Environmental Sciences</i>, 30, 238-243.</p> |
| <i>Books/Monographs</i> | <p>Faradiella Mohd Kusin, Wan Lutfi Wan Johari, Khairul Nizam Mohamed, Zulfa Hanan Ash'aari. Water quality and waste management. Penerbit UPM. ISBN 978-967-344-324-6.</p> |
| <i>Chapter in book</i> | <ol style="list-style-type: none"> 1. Sabri, M.N.S. & Ash'aari, Z.H (2023). Social Vulnerability Assessment to Natural Hazards in East Malaysia. In <i>Environ Sci Eng</i>, Keiji Ujikawa et al. (Eds): Environment and Sustainable Development. 2. Ash'aari, Z.H., Bigg, G.R. and Bryant, R.G. (2014) Patterns of Aerosol Over Malaysia from Multiple Satellite-Borne Sensors. In Aris, AZ., Tengku Ismail, T.H., Harun, R., Abdullah, A.M. & Ishak, M.Y. (eds). <i>From Sources to Solution</i> |

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| | Proceedings of the International Conference on Environmental Forensics 2013. Springer.579-584 (SCOPUS). |
| <i>Proceedings</i> | <ol style="list-style-type: none"> 1. Abdullah, S., Che Cob, Z., Selamat, M.H and Ash'aari, Z.H. (2007). Applying Software Agents in Supporting knowledge transfer process. 2nd International Conference of Informatics. T5-12 – T5-17. 2. Ash'aari, Z.H., Bigg, G.R. and Bryant, R.G. (2014) Patterns of Aerosol Over Malaysia from Multiple Satellite-Borne Sensors. Proceedings of The International Conference on Environmental Forensics 2013. 3. Othman, M., Ash'aari, Z.H., et al. (2016) Assessment of drought impacts on Vegetation Health: A Case study in Kedah. 8th IGRSM Conference and Exhibition on Remote Sensing &GIS 4. Muharam, F.M., Ash'aari, Z.H., Zaudi, M.A., Kamarulzaman, N.H., Latif, I. (2016). Assessments of Agricultural land use change and flood event. Bengkel Kajian Bencana Banjir. |
| <i>Other publications</i> | <p>Thesis</p> <ol style="list-style-type: none"> 1. Word Document Analyzer (2007). Universiti Putra Malaysia. 2. Aerosols, Forest fires and El-Nino: Air pollution issues in Malaysia (2013). The University of Sheffield. |
| <i>Computer software</i> | Word Document Analyzer (2007) |

| H. PROJEK PENYELIDIKAN TERDAHULU (Past Research Project) | | | | | |
|---|--|------------------------|-------------|-------------------------------------|---------------|
| <i>Project No.</i> | <i>Project Title</i> | <i>Role</i> | <i>Year</i> | <i>Source of fund</i> | <i>Status</i> |
| GP-IPS | A Geospatial Analysis of Adaptation Strategies for Climate Change-Induced Flood Disasters in Kota Tinggi, Johor | Principal Investigator | 2023-2025 | UPM | On-going |
| <i>FRGS/1/2019/WAB05/UPM/02/8</i> | Vulnerability and risk assessment towards heat wave events in Malaysia | Principal Investigator | 2019-2022 | Ministry of Higher Education (MOHE) | Completed |
| <i>LRGS/1/2016/UTM/01/1/5</i> | Integrating Socio-Economic Variables into Hydro-Geological and Water Contamination Risk Assessment In Selangor River Basin | Member | 2019-2024 | Ministry of Higher Education (MOHE) | On-going |
| <i>FRGS/1/2018/TK10/UPM/02/7</i> | Development of eco-efficient carbonated bricks from mining waste materials for carbon capture and storage of atmospheric carbon dioxide | Member | 2019-2022 | Ministry of Higher Education (MOHE) | Completed |
| <i>FRGS/1/2019/WAB05/UPM/02/9</i> | Understanding the transport pathway of riverine litter into the marine environment with the integration of Geographic Information System (GIS) | Member | 2019-2022 | Ministry of Higher Education (MOHE) | Completed |
| <i>TRGS/1/2016/UPM/02/6/4</i> | Modelling Drinking Water Distribution System (DWDS) vulnerability to Active Pharmaceutical Ingredients (APIs) by integration of geospatial-hydraulic and water quality model | Principal Investigator | 2016-2019 | Ministry of Higher Education (MOHE) | Completed |
| | Aerosols, Forest fires and El-Nino: Air pollution issues in Malaysia | Group Leader | 2008-2012 | Ministry of Higher Education (MOHE) | Completed |

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| GP-IPS | Impact of Historical Land Cover Conversion By Oil Palm Plantation On Greenhouse Gas Emissions In Peninsular Malaysia: A Geospatial Technology Approach | Principal Investigator | 2016 – 2018 | UPM | Completed |
| <i>FRGS/1/2014/ STWN01/UPM/02/1</i> | Drought-risk assessment and monitoring in Malaysia using remote sensing and GIS technique | Principal Investigator | 2014 – 2017 | Ministry of Higher Education (MOHE) | Completed |
| GP-IPM | The development of Decision support system for urban air quality management in Malaysia through the application of GIS and space-borne remote sensing observations | Principal Investigator | 2014 – 2017 | UPM | Completed |
| <i>FRGS/1/2017/ WAB05/UPM/02/1</i> | Habitat modelling and conservation of blood cockle; Anadara granosa spat fall area for sustainable supplies of cockle seed | Member | 2017-2020 | Ministry of Higher Education (MOHE) | Completed |
| <i>FRGS/2/2014/ STWN04/UPM/02/1</i> | Effect of seasonal Northeast monsoon on phytoplankton bloom at Pulau Perhentian, Terengganu: In case of iron bioavailability | Member | 2014-2017 | Ministry of Higher Education (MOHE) | Completed |
| GP-IPS | Analysis of urban Sprawl and its impact on green space using Entropy Approach and NDVI Index in the city of Seremban | Member | 2015-2017 | UPM | Completed |
| <i>FRGS/1/2015/ TK10/UPM/02/1</i> | Remedial strategies and carbon capture potential of mining waste: Passive sequestration of atmospheric carbon from bauxite residue (red mud) deposits | Member | 2015-2017 | Ministry of Higher Education (MOHE) | Completed |
| FRGS Special Grant | Modeling two-way interaction between agricultural land use change and flood event by the integration of geospatial technologies and land use modeler | Member | 2015-2015 | Ministry of Higher Education (MOHE) | Completed |
| FRGS | Detection of abandoned agricultural land using remote sensing | Member | 2014-2016 | Ministry of Higher Education (MOHE) | Completed |

| H. PROJEK KONSULTANSI (Consultation Projects) | | | |
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| <i>Title</i> | <i>Role</i> | <i>Source of fund</i> | <i>Status</i> |
| RFP for study on Impacts of Pre and Post Bakun Hydropower Dam Construction on Rejang River basin and Its communities | GIS Specialist | UNIMAS Holdings Sdn Bhd | On-going |
| Kajian Kesedaran Awam Mengenai Sains, Teknologi & Inovasi (Sti) Malaysia | Expert | Kementerian Sains, Teknologi & Inovasi (MOSTI) | Completed |
| Pembangunan Garis Panduan Dan Modul Pembentukan Kampus Lestari-Anugerah Alam Sekitar Di Malaysia | Expert | Jabatan Alam Sekitar | Completed |
| National Science, Technology & Innovation Policy (Nstip): Baseline Study | Expert | Kementerian Sains, Teknologi & Inovasi (MOSTI) | Completed |

| I. JARINGAN INDUSTRI DAN KOMUNITI (Industrial and Community Network) | | | |
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| <i>Title</i> | <i>Role</i> | <i>Industry/ Community Partner</i> | <i>Year</i> |
| Action for Nature | Committee | Malaysia Forest Fund | 2023 |
| ADPC – UPM Partnership and Consultative Meeting on Climate Change and the Nationally Determined Contributions (NDC) in Malaysia | Project Leader | Asian Disaster Preparedness Centre, Australian Department of Foreign Affairs and Trade | 2022 |
| Projek Kajian Risiko Bencana Kepada Alam Sekitar Dan Sosioekonomi Masyarakat Orang Asli Di Kampung Janda Baik | Project Leader | JAKOA, JKKK Kampung Janda Baik, JPS Pahang, PPD Daerah Bentong | 2022-2023 |
| Summer Course on Ecosystem-based Disaster Risk Reduction in the Tropics | Speaker | Universitas Gadjah Mada | 2018 |
| Cempaka-NEST Reach Program | Speaker | Cempaka International School & Pertubuhan Kelestarian Ekosistem Alam | 2018-2019 |
| Assessment of deforestation and afforestation impacts of (GHG) emissions in Peninsular Malaysia using geospatial technology | Project Leader | Ministry of Environment Japan, Japan Aerospace Exploration Agency (JAXA), National Institute of Environmental Studies | 2017-2019 |
| GOSAT | Project Leader | The Atmosphere and Ocean Research Institute (AORI), The University of Tokyo | 2017 |
| Projek Pengindahan Sungai Galing | Member | | 2016 |
| GIScience for Civil Management in Southeast Asia (civil-GIS) | Member | University of Salzburg | 2015 |

| J. PENYELIAAN (Supervision) | | | | | | |
|------------------------------------|------------------------|---------------|--------------|------------------|---------------|--------------|
| Category | Current Student | | | Graduated | | |
| | PhD | Master | Total | PhD | Master | Total |
| Chairman | 4 | 3 | 7 | 1 | 7 | 8 |
| Member | 2 | 2 | 4 | 4 | 3 | 7 |
| Total | 6 | 5 | 11 | 5 | 9 | 13 |

| K. PENGAJARAN (Teaching) | |
|--|---------------|
| Course Name | Level |
| Introduction to Atmospheric Science | Undergraduate |
| Environmental GIS | Undergraduate |
| Environmental Remote Sensing | Undergraduate |
| Atmospheric Science and Climate Change | Undergraduate |
| Introduction to Environmental GIS & Remote Sensing | Undergraduate |
| Advanced GIS & Remote Sensing | Undergraduate |
| Integrated Environmental Fieldwork | Undergraduate |
| Environmetrics | Undergraduate |
| Introduction to Environmetrics | Undergraduate |
| Statistical Analysis and Interpretation for Environmental Data | Postgraduate |
| Research Design and Methodology | Postgraduate |
| Geoinformatics for Disaster Management | Postgraduate |
| Earth Dynamics and Global Changes Adaptation | Postgraduate |