

## **AZINOOR AZIDA BINTI ABU BAKAR (IR) (TS)**

SCHOOL OF CIVIL ENGINEERING  
COLLEGE OF ENGINEERING  
UNIVERSITI TEKNOLOGI MARA  
40450 SHAH ALAM, SELANGOR  
MALAYSIA.

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### **ACADEMIC QUALIFICATION**

1. LEVEL: Master (MSc) in Water Engineering  
Universiti Putra Malaysia (2005)
2. LEVEL: Bachelor in Civil Engineering (Hons)  
Universiti Sains Malaysia (2000)

### **WORK EXPERIENCES**

- |                |   |
|----------------|---|
| 2023 – Present | : Senior Lecturer<br>UiTM Shah Alam                         |
| 2015 – 2023    | : Senior Lecturer<br>UiTM Pasir Gudang                      |
| 2009 - 2015    | : Senior Lecturer<br>UiTM Shah Alam                         |
| 2002 - 2009    | : Lecturer<br>UiTM Shah Alam                                |
| 2001 – 2002    | : Design Engineer<br>ACP Industries Berhad                  |
| 2000 – 2001    | : Civil / Site Engineer<br>Satriadesa Corporation Sdn. Bhd. |

### **MEMBERSHIP IN PROFESSIONAL BODIES**

1. Professional Technologies (Ts), Malaysia Board of Technologies (MBOT)
2. Graduate Member, Institution of Engineers, Malaysia (IEM)
3. Member, Board of Engineers, Malaysia (BEM)
4. Member, Japan Society of Civil Engineers (JSCE)
5. Member, Hong Kong Chemical, Biological & Environmental Engineering Society (HKCBEES)

## PUBLICATION RECORDS

### BOOK

1. Water Management for Sustainable Environment. **Azinoor Azida Abu Bakar**. ISBN: 983-364-308-6, 978-983-364-308-0 University Publication Centre (UPENA), UiTM, 2006.

### CHAPTER IN BOOK

1. Water Resources & Environmental Systems – Lee Wei Koon, Wardah Tahir, Jazuri Abdullah, Suzana Ramli, Azinoor Azida Abu Bakar, Nuryazmeen Farhan Haron. Penerbit Universiti Teknologi MARA. 2022.
2. Green Infrastructure: Materials and Applications – Interception Loss of Tree Canopy as Green Infrastructure. Azinoor Azida Abu Bakar. Springer. eBook ISBN – 978-981-16-6383-3 / Print ISBN – 978-981-16-6382-6. 2022.
3. The Effects of Temporal Resolution on Annual Interception Estimation. **A. A. A. Bakar** & M. Lu. *Advanced in Geoscience*. ISBN-13 978-981-238-808-7. World Scientific Publishing Co. Pte. Ltd, Singapore. 2010.
4. Canopy Interception Model. **Azinoor Azida Abu Bakar** & Muhammad Khairudin Khalil. *Shaping the Future Through Innovation and Invention Multidisiplne*. ISBN: 9789674014049. PTS Media Sdn Bhd. 2018.
5. Ex-Mine Area Sustainability: Evaluation of Levels of Contamination Due to Heavy Metals from Soil Characterization. Sabariah Arbai, **Azinoor Azida Abu Bakar**, Kamaruzzaman Mohamed and Zainab Mohamed. *Engineering and Technical Development for a Sustainable Environment*. CRC Press. Taylor & Francis Group. ISBN 978-1-77188-521-8 (hardcover). ISBN 978-1-315-20732-2 (PDF). 2017.

### INDEX JOURNAL (ISI / SCOPUS / ERA)

1. Comparison of Canopy Cover Effects on Rainfall Interception Loss in Tropical Forest with Homogenous and Mixed Tree Species. Azinoor Azida Abu Bakara, Zulkiflee Abd Latif, Wei-Koon Lee. *Jurnal Teknologi (Sciences & Engineering)* 85:2 (2023) 1–9.
2. Open Distance Learning of Modern Engineering Tool and Its Assessment for Civil Engineering Design Project Siong Wee Lee, Azinoor Azida Abu Bakar, Ahmad Idzwan Yusuf, Syed Muhammad Syed Yahya, Mohamad Rohaidzat Mohamed Rashid. *International Journal of Academic Research in Progressive Education and Development*, 12(1), 127–140 (2023).
3. The Effectiveness of Site Visit Approach in Teaching and Learning of Construction Site Safety: A Case Study in Civil Engineering Faculty, Universiti Teknologi MARA, Johor Branch, Pasir Gudang Campus. Ismail, Herda Balqis; Ismail, Azianti; Abu Bakar, Azinoor

- Azida; Abu Tali, Adrina Rosseira; Mohd Noor, Nur Asmaliza. Asian Journal of University Education, v17 n4 p212-221, 2021.
4. The effect of vegetation canopy on canopy storage capacity with different rainfall intensity. A.M. Nur Syahida and A.B. Azinoor Azida. MATEC Web of Conferences 250, 04001 (2018)
  5. Implementation of Open-Ended Laboratory (OEL) in Environmental Engineering Subject for Civil Engineering Diploma Program **A. B. Azinoor Azida**, M. H. Nora Farina, M. Z. Zuhaida, B. Fauzi and H. B. Muhamad Hasbullah. International Journal of Asian Social Science. Vol 8, no 4, 173-178. 2018. ERA.
  6. The Effects of Saltwater Intrusion to Flood Mitigation Project. **Azinoor Azida Abu Bakar.**, Muhammad Khairudin Khalil. E3S Web of Conferences 34, 02050 (2018). <https://doi.org/10.1051/e3sconf/20183402050>. 2018. SCOPUS.
  7. Preliminary Study on Tropical Forest Canopy Interception. **Azinoor Azida Abu Bakar.**, Muhammad Khairudin Khalil. Journal of Engineering and Applied Sciences 12 (21): 5572-5577. 2017. SCOPUS.
  8. The Beneficial Usage of Water Treatment Sludge as Pottery Product. **A. B. Azinoor Azida**, M. A. Wahid, F. Kamarudin. Journal of Fundamental and Applied Sciences. Vol. 9, no 6S (2017). <http://dx.doi.org/10.4314/jfas.v9i6s.42>. 2017. ISI WOS.
  9. Study on Stream Ability for Self-purification Process in Receiving Domestic Wastewater. **Azinoor Azida A. B.**, Muhammad Khairudin, K. Advanced Science Letters. American Scientific Publishers. 2016. SCOPUS.
  10. Annual Canopy Interception at Artificial Lowland Tropical Forest. **Azinoor Azida A. B.**, Minjao L. Hydrology and Earth System Sciences Discuss., 12, 4879–4907, 2015 [www.hydrol-earth-syst-sci-discuss.net/12/4879/2015/](http://www.hydrol-earth-syst-sci-discuss.net/12/4879/2015/) doi: 10.5194/hessd-12-4879-2015. IF: 4.256.
  11. Evaluation of a Simple Annual Canopy Evaporation Equation. **A. A. A. Bakar** & M. Lu. Annual Journal of Hydraulic Engineering, JSCE, Vol.56, 2012, February. 2012.
  12. Effects of Temporal Resolution on River Flow Forecasting with Simple Interception Model within a Distributed Hydrological Model. **A. A. A. Bakar** & M. Lu. International Journal of Research and Reviews in Applied Sciences. July 2011.

## INDEX PROCEEDING

1. The Effects of Saltwater Intrusion to Flood Mitigation Project. **Azinoor Azida Abu Bakar.**, Muhammad Khairudin Khalil. Proceedings in Environment, Energy and Earth Sciences. 2017.
2. Interception Loss in Lowland Artificial Reserved Forest. **Azinoor Azida Abu Bakar**, Zulkiflee Abd Latif, Zulkfli Yusop, Muhammad Khairudin Khalil. 2014 IEEE Colloquium on Humanities, Science and Engineering. 2014.

3. The Effectiveness of Corn Cob Activated Carbon in Rainwater Harvesting Filtration System. **Azinoor Azida A. B.**, Nor Syamira, M. 2014 IEEE International Conference on Technology, Informatics, Management, Engineering & Environment (TIME-E 2014). 2014. SCOPUS.
4. Performance of Electrokinetic Method for Remediation of Contaminated Soil. Sabariah Arbai, Zainab Mohamed, **Azinoor Azida Abu Bakar**, Sabiha Hanim Binti Saleh, Kamaruzzaman Bin Mohamed), Haryati Binti Awang. IEEE Symposium on Humanities, Science and Engineering. 2013.
5. Throughfall, Stemflow and Interception Loss of Artificial Tropical Forest. **Abu Bakar, A. A.**, Baki, A., Hamzah, N., Yusop, Z., Khalil, M. K. 2012 IEEE Colloquium on Humanities, Science and Engineering Research (CHUSER). 3-4 Dec. 2012. 92-96.
6. Study of Bioindicator at Mangrove Island: Case Study of Carey Island. Kamarudin, Faizah; Wahid, Marfiah Ab.; **Bakar, Azinoor Azida Abu**; Ahmad, Nurhafidzah; Atan, Ismail; Yahya, Zahrullaili; Tahir, Wardah; Ahmad, Juhaizad; Baki, Aminuddin. 2012 IEEE Symposium on Business, Engineering and Industrial Applications (ISBEIA). 23-26 Sept. 2012. 392 - 397
7. Application of Annual Interception Model with Temporal Resolutions Effects. **Bakar, Azinoor Azida Abu**; Baki, Aminuddin; Khalil, Muhammad Khairudin; Atan, Ismail; Ali, Mohd. Fozi. 2012 IEEE Symposium on Business, Engineering and Industrial Applications (ISBEIA). 23-26 Sept. 2012. 867 - 871
8. Annual interception loss estimation with a simple equation. **Bakar, A.A.A.**; Baki, A.; Atan, I.; Ali, F.; Yusop, Z.; Khalil, M.K. 2012 IEEE Symposium on Humanities, Science and Engineering Research (SHUSER). 24-27 June 2012. 1477 - 1482
9. Study of Soil Contamination at Mangrove Island: Case Study of Carey Island. **Bakar, A.A.A.**; Ahmad, N.; Wahid, M.A.; Kamaruddin, F.; Atan, I.; Yahya, Z.; Tahir, W.; Ahmad, J.; Baki, A. 2012 IEEE 8th International Colloquium on Signal Processing and its Applications (CSPA). 2012, 144 – 148 (10.1109/CSPA.2012.6194707)
10. Runoff Prediction using Rainfall Data and Catchment Characteristics. Man, N. F., Jaafar, J., **Abu Bakar, A. A.**, Ab. Wahid, M., Mohd Zaki, Z., Atan, I. 30th Conference of ASEAN Federation of Engineering Organisation (CAFEO30). 16-19 Dec. 2012.
11. Study of Water Quality at Mangrove Island. Study case : Carey Island. **Azinoor Azida Abu Bakar**, Aminuddin Mohd Baki, Juhaizad Ahmad, Zahrullaili Yahya, Wardah Tahir, Faizah Kamarudin, Marfiah Ab. Wahid, Ismail Atan, Norhafidzah Ahmad. International Conference on Science & Social Research 2010. IEEE, IEEE Malaysia, IEEE Malaysia PEL/IE/IA Joint Chapter 2010.

## PROCEEDING

1. The effects of rainfall intensity to floor interception of *Axonopus Compressus* (Dwaft) under controlled condition. A B Azinoor Azida, A M Nur Syahidah and W K Lee. 2021 IOP Conf. Ser.: Earth Environ. Sci. 646 012041
2. Interception Loss of Palm Oil Tree in Malaysia. **A. A. A. Bakar**, M. Lu & Z. Yusop. 22<sup>nd</sup> Annual Conference (2009). Japan Society of Hydrology and Water Resources. 2009.
3. Water Quality of Rivers in Carey Island, Malaysia. **Azinoor Azida Abu Bakar**, Marfiah Ab. Wahid, Faizah Kamarudin, Ismail Atan, Zahrullaili Yahya, Wardah Tahir, Aminuddin Mohd Baki, Juhaizad Ahmad, Mohd Zairuddin Ismail & Siti Aishah Kamaluddin. Proceedings of the International Conference and Expo on Environmental Management and Technologies (ICEEMAT'08). Universiti Teknologi Malaysia (UTM). 2008.
4. Study on Levels of Contaminations at Mangrove Island: Case Study Pulau Carey. Aminuddin Mohd Baki, Zahrullaili Yahya, Azinoor Azida Abu Bakar, Marfiah Ab. Wahid, Faizah Kamarudin, Ismail Atan, Wardah Tahir, Juhaizad Ahmad, Siti Aishah Kamaludin & Mohd Zairuddin Ismail. Conference on Scientific & Social Research (CSSR'08'09). 2009.
5. Study on River Water Quality at Mangrove Island: Case Study of Carey Island. Ismail Atan, Zahrullaili Yahya, Marfiah Ab. Wahid, Faizah Kamarudin, Wardah Tahir, Juhaizad Ahmad, Aminuddin Bin Mohd Baki, **Azinoor Azida Abu Bakar**, Siti Aishah Kamaluddin. International Conference on Civil Engineering 2008 (ICCE08). Universiti Malaysia Pahang, in collaboration with: IEM (Eastern Branch), JKR, JPS, KLiUC. 2008.
6. A Preliminary Study on Water Quality Using Bioindicator. Aminuddin Mohd Baki, **Azinoor Azida Abu Bakar**, Zahrullaili Yahya, Faizah Kamarudin, Marfiah Ab. Wahid, Ismail Atan. Proceedings of ISWS2007-International Seminar on Wetland and Sustainability. International Seminar on Wetland and Sustainability, International Islamic University, Universiti Kebangsaan Malaysia, Universiti Sains Malaysia, Universiti Teknologi MARA, Universiti Putra Malaysia and Kyoto University. ISBN 978-983-3142064. 2007.
7. A Non-Linear Cost Model Application for Solid Waste Collection Routes Selection. Aminuddin Mohd Baki, **Azinoor Azida Abu Bakar**, Zuhaida Mohd Zaki, Faizah Kamarudin, Marfiah Ab. Wahid. Proceedings of 25th Conference of ASEAN Federation of Engineering Organizations (CAFEO25). ASEAN Federation of Engineering Organisations (AFEO), the Philippines Technological Council (PTC), the Department of Environment and Natural Resources Philippines and the Department of Energy Philippines. 2007.
8. Trend of Solid Waste Collection in Urban River. Study Case – Batu River, Kuala Lumpur. M, Ab-Wahid, **A. A. Abu-Bakar**, S. Sabarudin. August 2006. International Conference on Local Government 2006. UiTM Cwgn Sabah, Sabah Economic Action Council, Ministry of Local Government and Housing Sabah, The Sabah State Public Sector Training Ins., Ministry of Housing and Local Government Malaysia. ISBN: 983-3643-66-3. 2006.
9. Domestic Wastewater Treatment with a Natural Coagulant, *Moringa oleifera*. **A. A. Abu-Bakar**, J. Jaafar, M. Ab-Wahid, M. K. Khalil, August 2006. International Conference on Local Government 2006. UiTM Cwgn Sabah, Sabah Economic Action Council, Ministry of

- Local Government and Housing Sabah, The Sabah State Public Sector Training Ins., Ministry of Housing and Local Government Malaysia. ISBN: 983-3643-66-3. 2006.
10. Identification the Beneficial Usage of Water Treatment Sludge. Marfiah Ab. Wahid, **Azinoor Azida Abu Bakar**, Aminuddin Mohd Baki, Faizah Kamaruddin, Nurul Izza Hassan, Wan Amizah Wan Jusoh, Tajul Ariffin Adam. August 2006. International Conference on Local Government 2006. UiTM Cwgn Sabah, Sabah Economic Action Council, Ministry of Local Government and Housing Sabah, The Sabah State Public Sector Training Ins., Ministry of Housing and Local Government Malaysia. ISBN: 983-3643-66-3. 2006.
  11. Effectiveness of Natural Polymer Compare To Synthetic Polymer in Wastewater Treatment. **Abu-Bakar, A. A.**, Khalil, M. K. June 2006. Young Researchers Conference on Applied Sciences. 2006.
  12. Effectiveness of Moringa Oleifera as Coagulant Aid in Turbidity Removal for Municipal Wastewater Treatment. **Abu-Bakar, A. A.**, Khalil, M. K. June 2006. International Seminar on Civil and Infrastructure Engineering 2006.
  13. Assessment on the Use of Natural Polymer in Turbidity & Colour Removal of Landfill Leachate. **Abu-Bakar, A. A.**, Mohd-Zaki, Z., Abd-Majid, M. F., Md-Taha, N. A. June 2006. International Seminar on Civil and Infrastructure Engineering 2006. 2006.
  14. Effectiveness of Moringa oleifera as Coagulant in Municipal Wastewater Treatment. **Abu-Bakar, A. A.**, Jaafar, J. July 2006. Conference on Scientific & Social Research 2006.
  15. Preliminary Study on the Effects of Mixing and Time on Turbidity Removal of Wastewater Treatment. **Abu-Bakar, A. A.**, Jaafar, J. 20<sup>th</sup> Symposium of Malaysian Chemical Engineers. Dec 2006.
  16. Sewage Treatment in Malaysia. 2004. **Abu-Bakar, A. A.**, Khalil, M. K. Prosiding Sustainable Science and Management. KUSTEM 3<sup>rd</sup> Annual Seminar. Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM) . 439-444. 2004.
  17. Banjir Kilat di Malaysia: Punca, Langkah Pencegahan dan Kekangan. 2002. **Abu-Bakar, A. A.** Prosiding Seminar Kebangsaan: Sains, Teknologi dan Sains Sosial. Proceedings of Seminar Kebangsaan Sains, Teknologi & Sains Sosial., UiTM Pahang, Kerajaan Negeri Pahang Darul Makmur. 349-353. 2002.
  18. Landslide Forecasting Using IDRISI GIS – Study Case: Penang, Malaysia. 2000. **Abu-Bakar, A.A.**, M.N. Sanusi. Prosiding Persidangan Kebangsaan Kejuruteraan Awam 99 (AWAM 99), USM Perak, 22 - 24 Jan 2000.

## GENERAL PUBLICATION (MAGAZINE / REPORT)

1. Bah besar luar jangka berpotensi berulang - Pakar Januari 7, 2022. Berita Harian.
2. Self-purification Capacity of River Receiving Shah Alam STP Effluent. Aminuddin Bin Mohd Baki, **Azinoor Azida Abu Bakar**, Jurina Jaafar, Ramlah Mohd Tajuddin, Ismail Atan, Mohamed Yusof. Water Malaysia. The Malaysian Water Association Quarterly, Asian Water Magazines/ Syed Hussein Publications Sdn. Bhd. ISBN: 1675-2392. 2009.
3. Study of the Level of Contaminations at Mangrove Island: Case Study of Carey Island. Aminuddin Mohd Baki, **Azinoor Azida Abu Bakar**, Marfiah Ab. Wahid, Ismail Atan, Zahrullaili Yahya, Faizah Kamarudin, Wardah Tahir, Juhaizad Ahmad. FRGS Final Report. 2010.
4. Reuse of Water Treatment Residue/Sludge as A Pottery Product. Aminuddin Mohd Baki, **Azinoor Azida Abu Bakar**, Jurina Jaafar, Ramlah Mohd Tajuddin, Faizah Kamarudin, Marfiah Ab. Wahid, Tajul Ariffin Adam, Syed Farid Syed Zin, Nurul Izzah Hassan & Wan Amizah Wan Jusoh. Water Malaysia: The Malaysian Water Association Quarterly. ISSN: 1675-2392. 2008.
5. Preliminary Study on the Use of Natural Polymers (Moringa Oleifera) to Enhance Sedimentation Process. **Azinoor Azida Abu Bakar**, Jurina Jaafar, Ramlah Mohd Tajuddin, Ismail Atan, Aminuddin Mohd Baki. Water Malaysia: The Malaysian Water Association Bi-Monthly. ISBN 1675-2392. 2008.
6. Application of Artificial Neural Network in Tidal Forecasting. Final Report. Lee, W. K., **Abu Bakar. A. A.** Institut Penyelidikan, Pembangunan dan Pengkormesilan, Universiti Teknologi MARA (IRDC), IRDC UiTM. 2007.
7. Solid Waste Collection Routes Selection. Final Report. Ab. Wahid, M., **Abu Bakar, A. A.** Institut Penyelidikan, Pembangunan dan Pengkormesilan, Universiti Teknologi MARA (IRDC), IRDC UiTM. 2007.
8. Children Environmental Awareness – Local Agenda 21. **Azinoor Azida Abu Bakar**, Muhammad Khairudin Khalil. August 2006. Buletin Jurutera. ISSN: 0126-9909. 2006.
9. Children Environmental Awareness – Local Agenda 21. Project Management & Capacity Development in Environment. Malaysian University Consortium for Environment and Development (MUCED) & Danish University Consortium for Environment and Development (DUCED). Project report 2006.
10. Effectiveness of Domestic Wastewater Treatment with a Natural Polymer, Moringa Oleifera. **Azinoor Azida Abu Bakar**, Jurina Jaafar, Final Report. Institut Penyelidikan, Pembangunan dan Pengkormesilan, Universiti Teknologi MARA (IRDC), IRDC UiTM. 2005.
11. Feasibility Study for Implementing LCM in the Automotive Industry in Malaysia. Case study: Proton Waja. Life Cycle Management – Integrating Life Cycle Assessment and Environmental Management Systems. Final Report. Malaysian University Consortium for Environment and Development (MUCED) & Danish University Consortium for Environment and Development (DUCED). Project report 2005

## RESEARCH PROJECT

1. Integrated Approaches in Water Quality Monitoring for River Health Assessment.  
On-going. (Nov 2021 – Oct 2023). / RM20,000.00  
Geran Inovasi UiTM Johor.
2. Building Maintenance Practices in Malaysian Public Universities.  
Completed. (Nov 2019 – Oct 2022) / RM20,000.00  
Collaboration Research Grant (CRG) UTM – UiTM
3. The Impact of Covid 19 Movement Order (MCO) to Air Quality in Malaysia.  
Completed. (Aug 2020 – Jan 2022) / RM2500.00  
Geran Bistari, UiTM Johor.
4. The Correlation of Canopy Interception Loss to Water Scarcity for Water Security in Malaysia.  
Completed. (May 2020 – April 2021)) / RM2000.00  
Geran Bistari, UiTM Johor.
5. The Effects of Canopy Characteristics on Rainfall Interception in Tropical Forest.  
Completed. (Dec 2019 – May 2022))  
Geran Mitra SDG UiTM
6. Water Resource Study for Pasir Gudang Area – Project Leader (UiTM)  
Completed. (Oct 2018 – Nov 2023) / RM100,000.00  
Collaboration Research Grant (CRG) UTM – UiTM – SAJ Ranhill - UTHM
7. Assessment of Water Scarcity-Related Drought Index for Water Security in Malaysia.  
Completed (Sept 2019 – Nov 2022) /RM69,200.00  
Fundamental Research Grant Scheme (FRGS), Ministry of Higher Education, Malaysia.
8. Morphodynamic Vulnerability to Impacts of Navigation Dredging and Dumping on Mangrove Swamp Habitats.  
Completed (Nov 2018 – Mac 2022) / RM62,000.00  
Fundamental Research Grant Scheme (FRGS), Ministry of Higher Education, Malaysia.
9. Canopy Interception Role in Flood Forecasting for Flood Management – Project Leader.  
Completed (Nov 2015 – Mei 2018) / RM 98,700.00  
Fundamental Research Grant Scheme (FRGS), Ministry of Higher Education, Malaysia.
10. Best Practices (BPs) on Open Ended Laboratory (OEL) Implementation for Civil Engineering Subjects – Project Leader.  
Completed (July 2016 – Jun 2018) / RM 10,000.00  
Academic & Research Assimilation (ARAS), Universiti Teknologi MARA.



11. Development of Student Attendance System Using Fingerprint Identification Method - Member.  
On-going (Nov 2016 – Nov 2018) / RM 10,000.00  
Academic & Research Assimilation (ARAS), Universiti Teknologi MARA.
12. Projek IISJ Mersing - Pengurusan Airsisa dan Sisa Pepejal Secara Berkesan di Kawasan Peranginan Mersing – Associate Researcher.  
Completed (Dec 2016 – Mei 2017)  
Institut Inovasi Strategik Johor –IISJ & Universiti Teknologi Malaysia (UTM).
13. Physical Water Quality of Recreation Lakes at Bandar Sri Alam, Masai, Johor – Project Leader.  
Completed. (January – December 2016) / RM 500.00  
Dana Universiti Teknologi MARA Johor (UJRG).
14. Interception Loss Canopy Cover, c Formulation Theory - Project leader.  
Completed. (Jul 2011 – Jun 2013) / RM 75,000.00  
Fundamental Research Grant Scheme (FRGS), Ministry of Higher Education, Malaysia.
15. pH Performance to Temperature Controlled for Heavy Metals Desorption Capacity from Contaminated Site – Member.  
Completed. (Dec 2010 – Dec 2012) / RM 50,000.00  
Fundamental Research Grant Scheme (FRGS), Ministry of Higher Education, Malaysia.
16. Study of the Level of Contaminations at Mangrove Island: Case Study of Carey Island – Project Leader.  
Completed. (July 2007 – April 2010) / RM 60,000.00  
Fundamental Research Grant Scheme (FRGS), Ministry of Higher Education, Malaysia.
17. Application of Artificial Neural Network in Tidal Forecasting – Member.  
Completed. (Mac 2006 – Feb 2007) / RM 7,500.00  
Institut Penyelidikan, Pembangunan dan Pengkomersilan (IRDC), UiTM.
18. Solid Waste Collection Routes Selection – Member.  
Completed. (Jan 2006 – Jan 2007) / RM 10,000.00  
Institut Penyelidikan, Pembangunan dan Pengkomersilan (IRDC), UiTM.
19. Effectiveness of Domestic Wastewater Treatment with Natural Polymer, *Moringa Oleifera* – Project Leader.  
Completed. (Sept 2004 – Sept 2005) / RM 20,000.00  
Institut Penyelidikan, Pembangunan dan Pengkomersilan (IRDC), UiTM.
20. Children Environmental Awareness – Local Agenda 21  
Project Management & Capacity Development in Environment.  
Completed. (2006).

Malaysian University Consortium for Environment and Development (MUCED) & Danish University Consortium for Environment and Development (DUCED).

21. Feasibility Study for Implementing LCM in the Automotive Industry in Malaysia.  
Case study: Proton Waja  
Completed. (2005).  
Life Cycle Management – Integrating Life Cycle Assessment and Environmental Management Systems  
Malaysian University Consortium for Environment and Development (MUCED) & Danish University Consortium for Environment and Development (DUCED).

## **CONSULTATION**

1. Perkhidmatan Mengumpul, Menyedia dan Membekal Data Hidrologi, Hidrodinamik, Gunatanah Dan Struktur Hidraulik Serta Menyedia dan Membekalkan Data-Data Kalibrasi dan Verifikasi untuk Kerja-Kerja Penyelidikan ke Arah Banjir Sifar di Lembangan Sungai Kelang. – Completed.  
Project Cost: RM 360,000.00  
September 2015 – December 2016  
Client: National Hydraulic Research Institute of Malaysia (NAHRIM)
2. Consultancy Services for Developing Inventory on Greenhouse Gases (GHG) for IWK Activities. – Completed.  
Project Cost: RM 154,938.00  
October 2012 – April 2013  
Client: Indah Water Konsortium (IWK)
3. Mengumpul, Membekal dan Menyediakan Data - Data Analisis di Tapak dan di Makmal serta Pelan Tindakan Rancangan Kawalan Kualiti Air Bagi Lembangan Sungai Muar, Johor. – Completed.  
Project Cost: RM 298,018.64  
November 2011 – December 2012.  
Client: Jabatan Pengairan dan Saliran Negeri Johor (JPS Johor)