

**PROF. EMERITUS DATO' DR. CHAN NGAI WENG**

Geography Section  
School of Humanities

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## BIOGRAPHY

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Chan Ngai Weng is a Professor of Physical Geography at the School of Humanities, Universiti Sains Malaysia (USM), specializing in Climatology, Water Resources and Flood Disaster Management. He received his Bachelor of Arts (Hons.) (Geography) (Upper 2<sup>nd</sup> Class) 1977 and a Master of Arts (Climatology and Meteorology) 1981, both from the University of Malaya, followed by a Doctor of Philosophy (Flood Management) from Middlesex University, United Kingdom (1992-1995). He served USM as a Lecturer (1986-1991), Associate Professor (1996-2001), Professor (2001-2014) and Contract Professor (2015-2023). His work is largely focused on climatology, water resources management, flood hazard management and community engagement related to these focal areas. He was the former Chairman of the Geography Section (1988-1990) and former Deputy Dean of Industry and Community Networks of the USM School of Humanities (2013-2015). In the international arena, he was a Visiting Professor at the University of Memphis USA (2000-2001) and at the Asian Institute of Technology, Thailand (2007-2008). He was also appointed as a Visiting Lecturer at Yokohama City University (2021). He was awarded the Certificate of Outstanding Service in USM 3 times in 1995, 2000 and 2011, the Community Service Award (AKM) in 2012 and the Outstanding Research Figure of the School of Humanities in 2007. In terms of professional services he has held various professional appointments as follows: Director of The International Emergency Management Society (1997-2001); Visiting Academic, Middlesex University, UK (1998-2022); Member of the Executive Council of the International Water Resources Association (IWRA) (2010-2012); Vice-President of the International Water Resources Association (IWRA) (2013-2015); and President, Water Watch Penang (1997-Present). In terms of research and projects, he has conducted more than 20 international projects and 60 national projects. He has published 166 papers in high quality refereed journals and presented more than 500 papers in conferences, seminars and workshops, including many as Keynote Speakers, Panelists or Invited Speakers. He is also involved in consulting activities and has completed more than 29 consulting projects. He firmly believes that academic research should ultimately benefit society. Hence, he is very passionate and active in in community engagement and Non-Government Organisation (NGO) work. As a result of all his work and contributions in academia and society, he has received various awards and recognition from various parties as follows: Pingat Jasa Masyarakat (PKT) Medal 2005; Darjah Johan Negeri (DJN) Medal 2009; "Asia Water Management Excellence Awards 2010; Community Service Award (AKM) 2012; Vietnam National University's Sustainable Development and Sustainable Cities Award (2016); Recognition as a Top 2 % World Scientist by Stanford University four years in a row for 2020, 2021, 2022, 2023; and the "Darjah Setia Pangkuan Negeri (DSPN) 2023" Award by the Penang State Government. As a recognition of his excellence as an academician, he was awarded the title of Emeritus Professor by USM in 2024. Due to his passion and contributions in the water management arena, he is often referred to as "The Waterman".

## AREAS OF EXPERTISE

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- **CLIMATOLOGY**
- **WATER RESOURCES MANAGEMENT**
- **FLOOD HAZARD MANAGEMENT**

## ACADEMIC QUALIFICATION

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- **PHD (MIDDLESEX UNIVERSITY) (1995), (Geography)**  
Middlesex University UK (MU)
- **MA (UM) (1981), (Climatology & Meteorology)**  
Universiti Malaya (UM)
- **BA (HONS) (UM) (1977), (Geography)**  
Universiti Malaya (UM)

## ADMINISTRATIVE DUTIES

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- **DEPUTY DEAN OF INDUSTRY AND COMMUNITY NETWORKS (2013-2015).**  
2013 - 2015
- **CHAIRMAN OF GEOGROHY SECTION**  
1988 - 1990

## MEMBERSHIPS

- **VICE PRESIDENT, INTERNATIONAL WATER RESOURCES ASSOCIATION (IWRA)**  
2013-2015 (International)
- **EXECUTIVE BOARD MEMBER, INTERNATIONAL WATER RESOURCES ASSOCIATION (IWRA)**  
2010–2012 (International)
- **MEMBER, INTERNATIONAL WATER RESOURCES ASSOCIATION (IWRA)**  
2010-2023 (International)
- **MEMBER, INTERNATIONAL WATER ASSOCIATION**  
2009-2023 (International)
- **MEMBER, INTERNATIONAL ASSOCIATION FOR HYDRO-ENVIRONMENT ENGINEERING AND RESEARCH**  
2015-2017 (International)
- **DIRECTOR (MEMBERSHIP SECTION), THE INTERNATIONAL EMERGENCY MANAGEMENT SOCIETY**  
1997– 2001 (International)
- **MEMBER, INTERNATIONAL ASSOCIATION OF HYDROLOGICAL SCIENCES**  
1997- 2000 (International)
- **MEMBER, ASSOCIATION OF AMERICAN GEOGRAPHERS**  
2001-2022 (International)
- \* **MEMBER, ASSOCIATION OF AMERICAN GEOGRAPHERS (SOUTHEASTERN DIVISION)**  
2001– 2002 (International)
- \* **MEMBER, THE INSTITUTE OF BRITISH GEOGRAPHERS**  
1992– 1995 (International)
- **MEMBER, BRITISH HYDROLOGICAL SOCIETY**  
1992 – 1995 (International)
- **MEMBER, ROYAL GEOGRAPHICAL SOCIETY**  
1992– 1995 (International)
- \* **MEMBER, NATURAL HAZARDS SOCIETY**  
1992– 1995 (International)
- \* **COMMITTEE MEMBER, GEOGRAPHY ASSOCIATION OF MALAYSIA (PERSATUAN GEOGRAFI MALAYSIA)**  
2024-Present (National)
- **VICE-CHAIRPERSON, MALAYSIAN WATER PARTNERSHIP**  
2011-2013 (National)
- \* **COMMITTEE MEMBER, NATIONAL GEOGRAPHY ASSOCIATION OF MALAYSIA**  
2002– 2006 (National)
- \* **COMMITTEE MEMBER, MALAYSIAN INVENTION & DESIGN SOCIETY (MINDS) - PENANG CHAPTER**  
2002-2005 (International)
- \* **MEMBER, MALAYSIAN NATIONAL COMMITTEE ON IRRIGATION AND DRAINAGE (MANCID)**  
2001– Present (National)
- \* **PRESIDENT, MALAYSIAN NATURE SOCIETY, PENANG BRANCH**  
1997– 2000 (National)
- \* **PRESIDENT & LIFE MEMBER, WATER WATCH PENANG (WWP)**  
1997– 2000; 2001-Present (National)
- \* **MEMBER, MALAYSIAN WATER ASSOCIATION (MWA)**  
1997– Present (National)
- \* **MEMBER, MALAYSIAN SCIENTIFIC ASSOCIATION**  
1997– 2020 (National)
- \* **ASSISTANT SECRETARY, NATIONAL GEOGRAPHY ASSOCIATION OF MALAYSIA**  
1989– 1991 (National)
- \* **TREASURER, MALAYSIAN ENVIRONMENTAL NGOS (MENGOs)**  
2015 – 2017 (National)

## AWARDS AND STEWARDSHIP

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1. **CERTIFICATE FOR SERVICE EXCELLENCE 1995 (SIJIL KHIDMAT CEMERLANG 1995)**  
Universiti Sains Malaysia, 1995 (University)
2. **FULBRIGHT SCHOLAR AWARD 2000-2001**  
Malaysian-American Center for Educational Exchange (MACEE), 2000-2001 (International)
3. **CERTIFICATE FOR SERVICE EXCELLENCE 2000 (SIJIL KHIDMAT CEMERLANG 2000)**  
Universiti Sains Malaysia, 2000 (University)
4. **MALAYSIAN EXCHANGE RESEARCHER FOR FY 2002 JSPS-VCC COOPERATIVE PROGRAM (ENVIRONMENTAL SCIENCE, ENGINEERING & ETHICS)**  
Malaysian and Japanese Governments, 2002 (International)
5. **MEDAL FOR OUTSTANDING SERVICE TO THE STATE (PINGAT KELAKUAN TERPUJI) 2005**  
Penang State Government (State)
6. **POST-DOCTORAL RESEARCH FELLOWSHIP (AS VISITING PROFESSOR) UNDER THE CIDA-AIT PARTNERSHIP, SEA-UEM PROJECT AT ASIAN INSTITUTE OF TECHNOLOGY, THAILAND 2006-2007**  
CIDA-AIT Partnership (International)
7. **TOP RESEARCHER OF SCHOOL OF HUMANITIES USM 2007 (TOKOH PENYELIDIKAN PUSAT PENGAJIAN ILMU KEMANUSIAAN USM 2007)**  
School of Humanities USM, 2007 (University)
8. **MERIT OF STATE CHAMPION (DARJAH JOHAN NEGERI) 2009**  
Penang State Government, 2009 (State)
9. **WINNER OF ASIA WATER MANAGEMENT EXCELLENCE AWARDS 2010 INDIVIDUAL CATEGORY (NATIONAL)**  
Asian Water Magazine and the Asiawater Organising Committee (Includes International Water Association, The Malaysian Water Association, Ministry of Energy, Green Technology and Water, Malaysia and MAMB Exhibitions), 2010 (International)
10. **CERTIFICATE FOR SERVICE EXCELLENCE 2011 (SIJIL KHIDMAT CEMERLANG) 2011**  
Universiti Sains Malaysia, 2011 (University)
11. **COMMUNITY SERVICE AWARD 2012 (ANUGERAH KHIDMAT MASYARAKAT (AKM) 2012)**  
Universiti Sains Malaysia, 2012 (University)
12. **AWARD FOR SIGNIFICANT CONTRIBUTION TO SUSTAINABLE URBAN DEVELOPMENT PROGRAMME AND URBAN DEVELOPMENT 2016**  
Vietnam National University, 2016 (International)
13. **ORDER OF THE DEFENDER OF STATE AWARD 2023 (DARJAH SETIA PANGKUAN NEGERI)**  
Penang State Government, 2023 (State)
14. **LISTED AS THE WORLD'S TOP 2 % SCIENTISTS 2020, 2021, 2022 & 2023**  
Stanford University for Citation Impact in a Single Year for 2020, 2021, 2022 & 2023
15. **EMERITUS PROFESSOR AWARD 2024**  
Universiti Sains Malaysia, 2024 (University)

## PUBLICATIONS

## Article in Journal

## WoS

- Chan, N.W. (1995) Choice and Constraints in Persistent Floodplain Occupance: The Influence of Structural Forces on Residential Location in Peninsular Malaysia. *Disasters* 19 (4), December, 287-307.
- Chan, N.W. and Parker, D.J. (1996) Response to Dynamic Flood hazard Factors in Peninsular Malaysia, *The Geographical Journal* 162 (3), November, 313-325.
- Chan, N.W. (1997) Institutional Arrangements for Flood Hazards in Malaysia: An Evaluation Using the Criteria Approach. *Disasters* 21 (3), 206-222.
- Chan, N.W. (2012) Managing Urban Rivers and Water Quality in Malaysia for Sustainable Water Resources. *International Journal of Water Resources Development* 28 (2), 343-354.
- Ranjan Roy, Ngai Weng Chan, Takehiko Uemura and Hidefumi Imura (2013) The Vision of Agri-Environmental Sustainability in Bangladesh: How the Policies, Strategies and Institutions Delivered? *Journal of Environmental Protection*, 2013, 4:40-51 doi:10.4236/jep.2013.48A2006 Published Online August 2013
- Roy, R. and Chan, N.W. (2014) A Multi-Level Evaluation of Policy Integration of Human Resource Development in Agriculture Sector. *Natural Resources*, 5, 119-129. <http://dx.doi.org/10.4236/nr.2014.54013>
- Roy, R., Chan, N. W. and Rainis, R. (2013) Development of Indicators for Sustainable Rice Farming in Bangladesh: A Case Study with Participative Multi-Stakeholder Involvement, *World Applied Science Journal*, Vol. 22 (5):672-682, 2013. DOI:10.5829/idosi.wasj.2013.22.05.2890
- Syafiq Shahrudin, Ngai Weng Chan, Nor Azazi Zakaria, Aminuddin Ab Ghani, Chun Kiat Chang and Ranjan Roy (2014) Constructed Wetlands as a Natural Resource for Water Quality Improvement in Malaysia. *Natural Resources*, 5, 292-298. doi:10.4236/nr.2014.57027
- Reza Mohammadpour, Syafiq Shahrudin, Chun Kiat Chang, Nor Azazi Zakaria, Aminuddin Ab Ghani and Ngai Weng Chan (2014) Prediction of water quality index in constructed wetlands using support vector machine. *Environmental Science and Pollution Research*, November 2014 (19 Nov 2014) DOI 10.1007/s11356-014-3806-7. @ Springer-Verlag Berlin Heidelberg 2014
- Fei Zhang, Tashpolat Tiyp, Verner Carl Johnson, Hsiang-te Kung, Jian-li Ding, Qian Sun, Mei Zhou, Ardak Kelimu, Ilyas Nurmuhammat and Ngai Weng Chan (2015) The influence of natural and human factors in the shrinking of the Ebinur Lake, Xinjiang, China, during the 1972–2013 period. *Environmental Monitoring and Assessment* 187: 4128 (Online), Springer International Publishing Switzerland. DOI 10.1007/s10661-014-4128-4
- Roy, R. and Chan, N.W. (2015) Determinants of sustainable irrigated and rainfed rice farming in Bangladesh. *Journal of Agricultural Science and Technology*, 17(6):1421-1435
- Bong, C.H.J., Lau, T.L., A. Ab. Ghani and Chan, N.W. (2016) Sediment deposit thickness and its effect on critical velocity for incipient motion. *Water Science & Technology* Vol 74 Issue 8, Oct 2016, Pages 1876-1884 (Available Online 6 August 2016, wst2016376; DOI:10.2166/wst.2016.376)
- Mohammadpour, R., Shahrudin, S., Zakaria, N.A., Ab. Ghani, A., Vakili, M. and Chan, N.W. (2016) Prediction of Water Quality Index in Free Surface Constructed Wetlands. *Environmental Earth Sciences*, Vol. 75, No. 139, pp. 1-12, doi: 10.1007/s12665-015-4905-6.
- Lai, C.H.; Chan, N.W.; Roy, R. (2017) Understanding Public Perception of and Participation in Non-Revenue Water Management in Malaysia to Support Urban Water Policy. *Water* 2017, 9, 26. doi:10.3390/w9010026
- Bakhtyar, B., Fudholi, A., Kabir Hassan, Azam, M., Lim, C.H., Chan, N.W. and Sopian, K. (2017) Review of CO<sub>2</sub> price in Europe using feed-in tariff rates. *Renewable and Sustainable Energy Reviews* 69 (2017), 685-691
- Tan, M.L., Ab Latif Ibrahim, Zulkifli Yusop, Chua, V.P. and Chan, N.W. (2017) Climate change impacts under CMIP5 RCP scenarios on water resources of the Kelantan River Basin, Malaysia. *Atmospheric Research* Volume 189, 1 June 2017, Pages 1–10 (Online) (© 2017 Elsevier B.V., IF 3.377).
- Chan, N.W., Roy, R., Lai, C.H. and Tan, M.L. (2018) Social capital as a vital resource in flood disaster recovery in Malaysia, *International Journal of Water Resources Development*, DOI:10.1080/07900627.2018.1467312, 1-20.
- Tan, M.L., Narimah Samat, Chan, N.W. and Roy, R. (2018) Hydro-Meteorological Assessment of Three GPM Satellite Precipitation Products in the Kelantan River Basin, Malaysia, *Remote Sensing*, 10, 1011:, 1-15
- Tan, M.L., Liew, J., Tangang, F.T., Chan, N.W. and Ngai, S.T. (2019) Future hydro-meteorological drought of the Johor River Basin, Malaysia, based on CORDEX-SEA projections. *Hydrological Sciences Journal*, DOI: 10.1080/02626667.2019.1612901
- Tan, M.L., Liew, J., Tangang, F.T., Samat, N., Chan, N.W., Yusop, Z. and Ngai, S.T. (2020) SouthEast Asia Hydro-meteorological drought (SEA-HOT) framework: A case study in the Kelantan River Basin, Malaysia. *Atmospheric Research*, Vol 246, 1 December 2020, 105155. <https://doi.org/10.1016/j.atmosres.2020.105155>
- Roy, R., Gain, A., Hurlbert, M.A., Samat, N., Tan, M.L. and Chan, N.W. (2020) Designing adaptation pathways for flood-affected households in Bangladesh. *Environment Development and Sustainability*, June 2020, DOI: 10.1007/s10668-020-00821-y
- Ariken, M., Zhang, F., Chan, N.W. and Kung, H.T. (2021) Coupling coordination analysis and spatio-temporal heterogeneity between urbanization and eco-environment along the Silk Road Economic Belt in China. *Ecological Indicators* 121 (2021) 107014.
- Wang, Z., Zhang, F., Zhang, X, Chan, N.W., Kung, H.T., Ariken, M., Zhou, X. And Wang, Y. (2021) Regional suitability prediction of soil salinization based on remote-sensing derivatives and optimal spectral index. *Science of the Total Environment* 775 (2021) 145807. ISSN 0048-9697, ISI, IF 6.551, Q1. <https://doi.org/10.1016/j.scitotenv.2021.145807> 0048-9697/© 2021 Elsevier B.V.
- Zhang, X., Chan, N.W., Pan, B., Ge, X., Yang, H. (2021) Mapping flood by the object-based method using backscattering coefficient and interference coherence of Sentinel-1 time series, *Science of The Total Environment*, Volume 794, 2021, 148388, ISSN 0048-9697, <https://doi.org/10.1016/j.scitotenv.2021.148388>.
- Tahouri J., Sadiki A., Karrat L., Johnson V.C., Chan N.W., Fei Z. & Kung H.T. (2021) Using a modified PAP/RAC model and GIS for mapping water erosion and causal risk factors: Case study of the Asfalou watershed, Morocco, *International Soil and Water Conservation Research* (2021),doi: <https://doi.org/10.1016/j.iswcr.2021.07.003> (ISSN 2095-6339; EISSN2589-059X
- Mohd Afiq Harun, Aminuddin Ab. Ghani, Reza Mohammadpour and Ngai Weng Chan (2021) GEP- and MLR-based equations for stable channel analysis. *Journal of Hydroinformatics* Vol 00 No 0, 1 doi: 10.2166/hydro.2021.047

- Airiken, M., Zhang, F., Chan, N.W. and Kung, H.T. (2022) Assessment of spatial and temporal ecological environment quality under land use change of urban agglomeration in the North Slope of Tianshan, China. *Environmental Science and Pollution Research* (2022) 29:12282–12299 (<https://doi.org/10.1007/s11356-021-16579-3>)
- Chen, D., Zhang, F., Tan, M.L., Chan, N.W., Shi, J., Liu, C. and Wang, W. (2022) Improved Na<sup>+</sup> estimation from hyperspectral data of saline vegetation by machine learning. *Computers and Electronics in Agriculture* 196 (2022) 106862 (<https://doi.org/10.1016/j.compag.2022.106862>)
- Tahouri, J., Sadiki, A., Karrat, L., Johnson, V.C., Chan, N.W., Zhang, F., and Kung, H.T. (2022) Using a modified PAP/RAC model and GIS-for mapping water erosion and causal risk factors: Case study of the Asfalou watershed, Morocco. *International Soil and Water Conservation Research* 10 (2022) 254-272
- Tew, Y.L., Tan, M.L., Samat, N., Chan, N.W., Mahamud, M.A., Sabjan, M.A., Lee, L.K., See, K.F. and Seow, T.W. (2022) Comparison of three water indices for Tropical Aquaculture Ponds Extraction using Google Earth Engine, *Sains Malaysiana*, 51 (2) (2022) 369-378.
- Cai, Y., Zhang F., Duan, P., Jim, C.Y., Chan, N.W., Shi, J., Liu, C., Wang, J., Bahtebay, J. and Ma, X. (2022) Vegetation cover changes in China induced by ecological restoration-protection projects and land-use changes from 2000 to 2020. *Catena* 217 (2022) 106530
- Zhang, F., Ju, S., Chan, N.W., Ariken, M., Tan, M.L., Yushanjiang, A., and Wang, Y. (2022) Coupled analysis of new urbanization quality (NUQ) and eco-environmental carrying capacity (EECC) of prefecture-level and above cities in China during 2003–2016, *Environment, Development and Sustainability*, 24:, 8008-8038
- Tan, M.L., Zhang, F., Chan, J.C.D., Hwa, Y.K., Shaharudin, S.M., Chan, N.W., and Rahim, A.A. (2022) Spatio-temporal analysis of precipitation, temperature and drought from 1985 to 2020 in Penang, Malaysia, *Water Supply*, 22/5:, 4757–4768
- Zhang, F., Chen, Y., Wang, W., Jim, C.Y., Zhang, Z., Tan, M.L., Liu, J., Chan, N.W., Wang, D., and Rahman, H.A. (2022) Impact of land-use/land-cover and landscape pattern on seasonal in-stream water quality in small watersheds, *Journal of Cleaner Production*, 357. 131907, ISSN 0959-6526, <https://doi.org/10.1016/j.jclepro.2022.131907>.
- Wang, J., Zhang, F., Lim, C.Y., Chan, N.W., Johnson, V.C., Liu, C., Duan, P., and Bahtebay, J. (2022) Spatio-temporal variations and drivers of ecological carrying capacity in a typical mountain-oasis-desert area, Xinjiang, China, *Ecological Engineering*, 180, 106672, ISSN 0925-8574, <https://doi.org/10.1016/j.ecoleng.2022.106672>.
- Liu, C., Zhang, F., Wang, X., Chan, N.W., Rahman, H.A., Yang, S., and Tan, M.L. (2022) Assessing the factors influencing water quality using environment water quality index and partial least squares structural equation model in the Ebinur Lake Watershed, Xinjiang, China, *Environmental Science and Pollution Research*, 29:, 29033–29048
- Zhang, F., Wang, Y., Jim, C.Y., Chan, N.W., Tan, M.L., Kung, H.T., Shi, J., Li, X. and He, X. (2023) Analysis of Urban Expansion and Human–Land Coordination of Oasis Town Groups in the Core Area of Silk Road Economic Belt, China. *Land* **2023**, 12, 224. <https://doi.org/10.3390/land12010224>
- Zhang, F., Duan, P., Jim, C.Y., Johnson, V.C., Liu, C., Chan, N.W., Tan, M.L., Kung, H.T., Shi, J., and Wang, W. (2023) An Advanced Spatiotemporal Fusion Model for Suspended Particulate Matter Monitoring in an Intermontane Lake. *Remote Sens.* **2023**, 15, 1204. <https://doi.org/10.3390/rs15051204>
- Zhang, F., Li, X., Zhou, X., Chan, N.W., Tan, M.L., Kung, H.T., and Shi, J. (2023) Retrieval of soil salinity based on multi-source remote sensing data and differential transformation technology, *International Journal of Remote Sensing*, 44:4, 1348-1368, DOI: 10.1080/01431161.2023.2179900
- Ran, H., Zhang, F., Chan, N.W., Tan, M.L., Kung, H.T. and Shi, J. (2023) "New Composite Nighttime Light Index (NCNTL): A New Index for Urbanization Evaluation Research," in *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, doi: 10.1109/JSTARS.2023.3258754
- Guo, L., Zhang, F., Chan, N.W., Tan, M.L., Kung, H.T. and Zhang, M. (2023) Spatiotemporal variability of photosynthetic and non-photosynthetic vegetation under climate change in arid and semiarid regions in China, *International Journal of Remote Sensing*, 44:12, 3837-3860, DOI: 10.1080/01431161.2023.2229496
- Samat, N., Goh, K.H., See, K.F., Ibrahim, R.A., Chan, N.W., Tan, M.L., Lee, L.K., Seow, T.W., Sabjan, M.A. (2023) A meta-analysis of aquaculture technical efficiency studies. *Rev Aquac.* 2023: 1–21
- Li, Z., Zhang, F., Shi, J., Chan, N.W., Tan, M.L., Kung, H.T., Liu, C., Cheng, C., Cai, Y., Wang, W. And Li, X. (2023) Remote sensing for chromophoric dissolved organic matter (CDOM) monitoring research 2003–2022: A bibliometric analysis based on the web of science core database, *Marine Pollution Bulletin*, Volume 196, 2023, 115653, ISSN 0025-326X, <https://doi.org/10.1016/j.marpolbul.2023.115653> (<https://www.sciencedirect.com/science/article/pii/S0025326X23010883>)
- Zhang, M., Zhang, F., Guo, L., Dong, P., Cheng, C., Kumar, P., Johnson, B.A., Chan, N.W. and Shi, J. (2023) Contributions of climate change and human activities to grassland degradation and improvement from 2001 to 2020 in Zhaosu County, China. *Journal of Environmental Management* 348 (2023) 119465
- Cao, N., Zhang, F., Liu, C., Chan, N.W., Tan, M.L., Shi, J., Lin, X. (2023) Spatio-temporal analysis of colored dissolved organic matter over Ebinur Lake in Xinjiang, China, *Ecological Informatics*, Volume 78, 2023, 102339, ISSN 1574-9541, <https://doi.org/10.1016/j.ecoinf.2023.102339>
- Wang, P.; Zhou, J.; Jin, X.; Shi, J.; Chan, N.W.; Tan, M.L.; Lin, X.; Ma, X.; Lin, X.; Zheng, K.; et al. (2024) The Impact of Offshore Photovoltaic Utilization on Resources and Environment Using Spatial Information Technology. *J. Mar. Sci. Eng.* 2024, 12, 837. <https://doi.org/10.3390/jmse12050837>
- He, X., Zhang, F., Jim, C.Y., Chan, N.W., Tan, M.L. and Shi, J. (2024) A new method to extract coal-covered area in open-pit mine based on remote sensing, *International Journal of Remote Sensing*, 45:17, 5901-5916, DOI: 10.1080/01431161.2024.2382846
- Guo, L., Zhang, F., Chan, N.W., Shi, J., Tan, M.L., Kung, H.T., Zhang, M., Qiao, Q. (2024) Interactions of climate, topography, and soil factors can enhance the effect of a single factor on spring phenology in the arid/semi-arid grasslands of China, *Journal of Cleaner Production*, 2024, 143556, ISSN 0959-6526, <https://doi.org/10.1016/j.jclepro.2024.143556> (<https://www.sciencedirect.com/science/article/pii/S0959652624030051>)
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- Song, J., He, X., Zhang, F., Ma, X., Jim, C.Y., Johnson, B.A. and Chan, N.W. (2024) Analyzing and predicting LUCC and carbon-storage changes in Xinjiang's arid ecosystems under the carbon neutrality goal. *Remote Sens.* 2024, 16(23), 4439; <https://doi.org/10.3390/rs16234439>
- Wu, Y., Liu, C., Zhang, F., Li, M., Chan, N.W., Oke, S.A., Ma, X., Wei, L. (2024) Long-term dramatic spatial and temporal changes in the watershed areas of multiple types of lakes and reservoirs in Xinjiang, China, *Ecological Indicators*, Volume 169, 2024, 112885, ISSN 1470-160X, <https://doi.org/10.1016/j.ecolind.2024.112885>. (<https://www.sciencedirect.com/science/article/pii/S1470160X24013426>)

## ESCI

Chan, N.W. (1996) Risk, Exposure and Vulnerability to Flood Hazards in a Rapidly Developing Country: The Case of Peninsular Malaysia. *Akademika* Number 49, July 1996, 107-136.

Sathiamurthy, E., Goh, K.C. and Chan, N.W. (2007) Loss of Storage Areas due to Future Urbanization at Upper Rambai River and its Hydrological Impact on Rambai Valley, Penang, Peninsular Malaysia. *Journal of Physical Science*, Vol. 18 (2), 59-79, 2007.

## ERA

Roy, R., Chan, N. W. and Rainis, R. (2013) "Development of an Empirical Model of Sustainable Rice Farming: A Case Study from Three Rice-Growing Ecosystems in Bangladesh," *American-Eurasian Journal of Agricultural & Environmental Sciences*, Vol. 13 (4): 449-460, 2013. DOI:10.5829/idosi.ajeaes.2013.13.04.1946

Roy, R., Lai, C.H., Paul Ofei-Manu and Chan, N.W. (2015) Analysing temporal changes and sustainability of of rainfed "Aus Rice" production systems. *International Journal of Society System Science*, 2015 Vol.7 No.1, pp.47-67

## SCOPUS

Chan, N.W. (1995) Flood Disaster Management in Malaysia: An Evaluation of the Effectiveness of Government Resettlement Schemes. *Disaster Prevention and Management: An International Journal* 4 (4), 22-9.

Chan, N.W. (1995) A Geographical Perspective of Flood Hazard Creation and Perpetuation in Peninsular Malaysia. *Kajian Malaysia*, XIII No. 2, Dec., 20-46.

Abd. Latif Ibrahim and Chan, N.W. (1995) Pola Min Hujan Tahunan, Musiman dan Bulanan di Negeri-Negeri Barat Laut Semenanjung Malaysia: Satu Analisis Statistik. *Jurnal Kemanusiaan*, 2, December, 95-116.

Chan, N.W. (1997) Increasing Flood Risk in Malaysia: Causes and Solutions. *Disaster Prevention and Management: An International Journal* 6 (2), 72-86.

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## RESEARCH PROJECT

### International

Chan N W (PI) **A Contextual Analysis of Flood Hazard Management in Peninsular Malaysia**, PhD Research Project jointly funded by Universiti Sains Malaysia and Middlesex University. Total funding inclusive of scholarship amounts to RM168,000.00 (September 1991 - September 1995)

Chan N W (PI) **Managing Water Resources in The 21st Century In Malaysia**. A Research Grant to produce a book. Funded by the Alliance for a responsible and United World (Paris). A Total of RM10,000.00 was approved for this project (1 September 1998 - 31 December 1999).

Chan N W (PI) and Kung H T **Fulbright Scholar Programme – Management of Flood Hazards in the Memphis Area, Tennessee, USA and Management of Flood Hazards in Penang, Malaysia: A Comparative Study**. A joint research programme worth \$15,050.00 approved under the Malaysian-American Center for Educational Exchange (MACEE). The other researcher is Professor Hsiang-te Kung of the Department of Geography, University of Memphis, Tennessee, USA. The period of the research is from 17 August 2000 to 30 June 2001.

Chan N W (PI), Barrow C J and Clifton J **Land Use, Land Development and Control of Environmental Degradation in Highland areas of Peninsular Malaysia: Supporting Sustainable Livelihoods**. DFID, The British Council Higher Education Links. Joined project together with (Dr) C.J. Barrow [UNIV. WALES SWANSEA] and (Dr) J. Clifton [PORTSMOUTH UNIV.]. Total Funding sought is RM12,000.00 (Research period is 01 APRIL 2002 - 31 MARCH 2005).

Chan N W (PI), Barrow C J and Clifton J **Sustainable Development of Cameron Highlands: Issues & Challenges**. DFID. The British Council Higher Education Links. Joined book project with (Dr) C.J. Barrow [UNIV. WALES SWANSEA] and (Dr) J. Clifton [PORTSMOUTH UNIV.]. Funding totaled RM4,500.00 for the publication of a book (Research Period is 1 May 2005 - 31 July 2005).

Chan N W (PI) **A Comparative Study of Community Water Resources Management in Thailand and Malaysia with Emphasis on the Role of Women**. Asian Institute of Technology, Southeast Asia Urban Environmental Management Applications (SEA-UEM) Project. Post-Doctoral Fellowship Research Sponsored by CIDA-AIT. A total of 150,000.00 Baht (RM15,000.00) was awarded under this project (Research Period is 1 May 2006 – 30 April 2007).

Barrow C J (PI) and Chan N W **Highlands Under Threat in Malaysia: Assessing The Key Problems And Identifying Sustainable Development**. The British Academy, 10 Carlton House Terrace, London SW1Y 5AH. Joint project together with (Dr) C.J. Barrow as Head [UNIV. WALES SWANSEA]. Total Approved Funding is £18,073 (Approximately RM126,500.00 (Research Period is 1 October 2006 – 1 October 2008).

Jamaluddin Md Jahi (PI) and Chan N. W. **Dampak Pembangunan terhadap Alam Sekitar dan Kepentingan Pengurusan Alam Sekitar Bersepadu di Provinsi Riau, Indonesia**. Government of Riau Province, June 2012 to August 2013. RM1,000,000.00 approved.

Chan N W (PI) Participatory approaches in urban water management in Asia, for the city of Georgetown, Penang. **Lee Kuan Yew School of Policy, National University of Singapore International Grant** of SGD4500.00 (RM11,584.71). Duration of project 2013-2014.

Chan N W (PI) and Masazumi Ao. **Collaborative Learning of Integrated River Basin Management: A Comparative Study of the Tsurumi River Management Model and Pinang River Management Model**. The sumitomo Foundation Fiscal 2014 Grant for Japan-related Research Projects. Duration 31 April 2015 – 31 March 2016. Grant Amount is US\$6500.00 (RM23,354.50).

Chan NW (PI), Masazumi Ao and Hidefumi Imura. **Research, Development and Publication of a Textbook titled "Textbook for Sustainable Urban Development Program Volume 1"**. Yokohama City University Global Cooperation Institute for Sustainable Cities (GCI) Grant of RM21,840.00.

Tan Mou Leong (PI), Chan Ngai Weng, Ruslan Rainis, Wan Ruslan Ismail, Narimah Samat, James Haywood, Matthew Hawcroft and Kevin Ivan Hodges. **Impacts of PRecipitation from Extreme StormS - Malaysia (IMPRESS – Malaysia)**. Newton-NERC Grant, 203.PHUMANITI.6780001, 1 Jan 2019 to 31 Dec 2021.

Chan N W (PI), Hong C.W., and Baker, H. International Project between Water Watch Penang and Clean International titled **"Water Conservation in Penang Schools, Malaysia"**. Grant from INTEL International Via Clean International totaling US\$210,695.00 (RM941,451.17)

Chan N W (PI), Hong C.W., and Baker, H. International Project between Water Watch Penang, Clean International and Gravity Water titled **"Rainfall Harvesting Project in Kelantan and Penang Schools, Malaysia"**. Grant from INTEL International Via Clean International totaling RM267,000.00

### National

Chan N W (PI) **A Quantitative Analysis of Rainfall Patterns and Drought Occurrences in Northwest Peninsular Malaysia**. M.A. Dissertation Research, Funded by the University of Malaya via Tutorship Scheme worth RM36,000.00 over 3 years (June 1977 - January 1981).

Chan N W (PI) **The Climate of Penang Hill : A General View of Existing Climatic Conditions as Compared to its Surrounding Lowlands**. Funded by Universiti Sains Malaysia's Short-term Research Grant Project titled 'Kajian Tentang Ciri-Ciri Persekitaran dan Diversiti Flora dan Fauna Bukit Bendera Pulau Pinang'. A total of RM13,736.00 was approved (February 1991 - August 1991).

Chan N W (PI) **Amalan-Amalan Penanaman Padi Di Sawah Sempadan dan Sungai Burong, Mukim Tanjong Karang dan Pengaruhnya Terhadap Perubahan Kualiti Air Permukaan**, Funded by Universiti Sains Malaysia's R & D Social Science Research Grant Project titled 'Satu Kajian Tentang Perubahan Kualiti Air Permukaan Akibat Aktiviti-Aktiviti Dalam Kitaran Penanaman Padi di Mukim Tanjong Karang, Daerah Kuala Selangor' (August 1988 -August 1991). A total of RM89,390.00 was approved (Translation: Padi Farming Practices in Sawah Sempadan and Sungai Burong, Mukim Tanjong Karang and its influences on Surface Water Quality Changes')

Chan N W (PI) **The Influence of Climate, especially Floods, on Agriculture, Tourism and Other Economic Activities in the East Coast of Peninsular Malaysia**, Short term Research Grant, Universiti Sains Malaysia totaling RM18,940.00 (August 1995 - August 1997).

Chan N W (PI & Hydrologist); Dr Wan Ruslan Ismail (Geomorphologist); Dr Ab Latif Ibrahim (Climatologist/Water Resource Expert); and Associate Professor Dr Morshidi Sirat (Urban/Industrial Geographer and Planner). A total of RM44,840.00 was approved by the Institute of Strategic and International Studies (ISIS) Malaysia for our research project **"Urban Sustainability and the Effects of Rapid Socio-Economic, Industrial and Infrastructure Development in Penang Island on the Environment, with special reference to Soil Erosion, Landslides, Water Pollution and Flooding"** (September 1996 - April 1998).

Chan N W (PI) **Hill Land Development and Effects On The Environment: Some Case Studies In Bukit Bendera (Penang), Bukit Larut (Perak) And Cameron Highlands (Pahang)**. IRPA Short Term Research Grant, Universiti Sains Malaysia. A total of RM14,380.00 was approved for this project (1 August 1998 - 31 July 1999).

Chan L K (PI), Che Salmah, Chan N W and Ho S H *Climate and Hydrology of Pantai Acheh Forest Reserve, Penang*. Part of the Malaysian Nature Society (Penang Branch) Project on **Climate, Hydrology, Flora and Fauna Diversity and the Role of the Pantai Acheh Forest Reserve as a National Park in Pulau Pinang**. A Total of RM14,000.00 was approved for this project (1 December 1999 - 31 -December 2000).

Chan N W (PI) **Assessment of Available Water Resources, Water Supply and Demand, Issues, Threats and Recommendations for Sustainable Development of Water Resources in Penang in the 21st Century**. Funding applied for under the Short-term Intensification of Research in Priority Areas (IRPA) of the Ministry of Science, Technology and the Environment (MOSTE) of Malaysia. Total funding approved is RM8,698.20. (August 2000 to July 2002).

Chan N W (PI) **An Assessment of Climate Change in Cameron Highlands**. IRPA Short-term Research under the 8<sup>th</sup> Malaysia Plan totaling RM17,014.00 (Research Period is 1.4.2002-31.3.2003).

Chan N W (PI) **Developing a Model of Flood Hazards on Urban Floodplains in Malaysia**. Universiti Sains Malaysia Fundamental Research Grant (FRGS) Year 2003. Total funding approved is RM66,530.00. Prof Koh H L and Assoc. Prof. Aminuddin Ab Ghani were later incorporated into the research (Research Period is from 1 October 2003 - 30 September 2005).

Chan N W (PI), Norizan Md Nor and Suriati Ghazali **Environmental Change and Sustainable Tourism: A Study of Impacts, Benefits and Involvement of Orang Asli Communities Along the Perak-Pahang-Kelantan Borders**. IRPA Short-term Research under the 8<sup>th</sup> Malaysia Plan. This is a joint project with Associate Professor Dr Norizan Md Nor and Dr Suriati Ghazali. Total funding sought is RM19,974.00 (Research Period is 1 April 2004 - 31 March 2005).

Chan N W (PI) **Ecotourism and Environmental Conservation in Small Islands in the East Coast of Peninsular Malaysia**. Universiti Sains Malaysia Short Term Research Grant (A/C No. 304/PHUMANITI/637069). Amount approved is RM15,930.00 (Period of research 15 October 2006 – 14 October 2008).

Chan N W (PI), Che Salmah Md Rawi and Tarmiji Masron **Modelling Environmental Awareness, Perception, Education and Lifestyle Changes in Environmental Conservation in Major Cities in Malaysia**. FRGS Grant 203/PHUMANITI/671011 (Research Period is 1 November 2006 - 31 October 2009 & Amount Approved is RM60 000.00).

Jabil Mapjabil (PI), Chan N W, Norizan Md Nor and Suriati Ghazali **Developing A Comprehensive Model on Ecotourism Incorporating Local Communities, tour Operators, Hoteliers and Tourists Towards Sustainable Development in Highlands Areas in Malaysia**. FRGS Grant 203/PHUMANITI/671014. (Research Period is 1 November 2006 - 31 October 2009 & Amount Approved is RM60 000.00).

Anisah Lee Abdullah (PI), Chan N W and Suriati Ghazali **Traditional Coastal Fishing Communities in North Malaysia: Towards A New Model For Sustainability**. Fundamental Research Grant Scheme (FRGS) (Research Period is 1 September 2007 - 31 August 2010 & Amount Approved is RM60 000.00).

Chan N W (PI), Jabil Mapjabil and Tarmiji Masron **Tourist Perception, Needs and Willingness to Pay for Tourism Products and Facilities in Kinabalu Park, Sabah**. Universiti Sains Malaysia "Short Term Research Grant"304/PHUMANITI/638149 (Research Period is 1 July 2008 – 30 June 2010 & Amount Approved is RM19,983.00).

Saidatulakmal Mohd (PI), Chan N W and Jacqueline Liza Fernandez **The Forgotten Heritages of Penang – Contingent Valuation Study**. Universiti Sains Malaysia "Research University Grant" 1001/PSOSIAL/816075. (Research Period is 2 Years: 15 November

2008 – 14 November 2010 & Amount Approved is RM152,108.68).

Abu Talib Ahmad (PI), Chan N W (Team Leader on Natural Heritage and Man-Environment Reklationships), Sohaimi Abdul Aziz (Team Leader on Cultural Heritage), Ooi K G (Team Leader on Historical Heritage), Jelani Harun, Hajar Rahim and Ruslan Rainis (Team Leader on GIS) **Natural and Cultural Heritage Focussing on the Northern Region of Peninsular Malaysia (Perlis, Kedah, Penang and North Perak)**. Universiti Sains Malaysia "Research University (RU) Grant" 1001/PHUMANITI/816037 (Research Period is 1 October 2007 – 30 September 2010. Approved Amount is RM985,600.00).

Chan N W (PI), Asyirah Abdul Rahim and Narimah Samat **A Comparative Evaluation of The Potentials, Needs And Sustainability of Taman Negara National Park, Kinabalu National Park and Langkawi Geopark As Ecotourism Sites**. Universiti Sains Malaysia "Research University (RU) Grant" 1001/PHUMANITI/816097 (Research Period is 15 May 2009 – 14 May 2011 & Amount Approved is RM93,969.12).

Chan N W (Main Supervisor) and Hong Chern Wern (PI, PhD Candidate) **Sustainable National Park Management Modelling by Using the Driving Force-Pressure-State-Impact-Response (DPSIR) Framework: The Case of Penang National Park**. Universiti Sains Malaysia "Incentive Grant (Postgraduate Student)" 1001/PHUMANITI/821103 (Research Period is 6 Jan 2009 – 31 Dec 2012 & Amount approved is RM15,000.00).

Chan N W (PI) and Tarmiji Masron **The Significance of Human Factors in Effective Disaster Management in Malaysia: A Case Study of Flood Disasters**. Universiti Sains Malaysia "Research University (RU) Grant" 1001/PHUMANITI/816106 (Research Period is 1 June 2009 – 30 May 2011 & Amount approved is RM99,990.00).

Chan N W (Main Supervisor) and Azreen Rozainee Binti Abdullah (PI, PhD Candidate) **Sustainable Natural Heritage Management of Royal Belum**. Universiti Sains Malaysia "Incentive Grant (Postgraduate Student)" 1001/PHUMANITI/821103 (Research Period is 1 Sep 2009 – 31 Oct 2012 & Amount approved is RM15,000.00).

Chan N W (PI), Mashhor Mansor, Lai Sai Hin and Narimah Samat. **A Study of River Models in Malaysia**. Account Number 203/PHUMANITI/6711198. Duration - 1 July 2011 to 30 June 2013. RM50,000.00 approved. Fundamental Research Grant Scheme (FRGS). 203/PHUMANITI/6711198

Narimah Samat (PI), Chan N W et al. **"Modelling and Identifying Sustainable Urban Growth Boundary: A Study on Georgetown Conurbation and its Impact on Urban And Peri-Urban Ecosystems"**. Project Number 203/PHUMANITI/6711199. 1 August 2011-31 July 2013. RM50,000.00 approved. Fundamental Research Grant Scheme (FRGS).

Nor Azazi Zakaria (PI), Chan N W. (Team Leader 1), Mohd Nor Desa (Team Leader 2), et al. **Urban Water Cycle Processes, Management & Societal Interactions: Crossing from Crisis to Sustainability**. Kementerian Pendidikan Tinggi Long Term Fundamental Grant Scheme (LRGS) 2011-2016. RM10 million approved.

Chan N. W. (PI), Mazlin Mokhtar, Salmijah Surif, Chamhuri Siwar, Lee Yook Heng, Jamaluddin Md Jahi, Maimon Abdullah, Maketab Mohamed, Suriati Ghazali, Narimah Samat, Asyirah Abdul Rahim, Lok Chong Hoe, Noor Shakirah Mat Akhir **Human Aspects of Water Security Focussing on Governance, Water Demand Management and Non-Revenue Water Management in Urban Areas in Malaysia**. Kementerian Pendidikan Tinggi Long Term Fundamental Grant Scheme (LRGS) 2011-2013. Account Number 203/PKT/6724003. RM1,013,400.00 approved. 203/PKT/6724003. Jun 2011-Jun 2014.

Chuah Chiew Yen (PI, Masters Candidate) and Chan N W (Main Supervisor) **Assessing the Effectiveness of Environmental Education System in Secondary Schools in Penang, Malaysia**. Universiti Sains Malaysia "Postgraduate Research Grant Scheme (PRGS) 1001/PHUMANITI/837071 (Research Period is 15 Sep 2011 – 14 Sep 2013 & Amount approved is RM3,335.00).

Badaruddin Mohamed (PI), Chan N. W., Alias Abdullah, Vikneswaran Nair, Nimatul Adha Nordin, Awangku Hassanal Pengiran Bagul, A'zizan Hussain **Physical & Environmental Rural Tourism Capacity Framework**. Kementerian Pendidikan Tinggi Long Term Fundamental Grant Scheme (LRGS) 2011-2016. Account No. 304/PPBGN/650570/T121. RM1,944,888.00 approved.

Chan N W (PI), Ku Ruhana (UUM), Mohamad Zaini Karim (UUM), Abdul Razak Chik (UUM), Sallahuddin Hassan (UUM) and Fader Abdullah (UiTM, Perlis). **Long Term Research Project (LRGS) under UUM titled "Economic Model for Flood Disaster Impact Analysis"**, RM20,000.00, 01 August 2012 – 31 July 2016. Account Number 304/PHUMANITI/650710/U143.

Chan N W (PI), Main Rindam, Radiah Yusof and Nabsiah Abdul Wahid. **Engaging and educating orphans and primary school children in water and wastewater quality awareness and monitoring in Penang**. University-Industry-Community Engagement Grant from Division of Industry & Community Network USM. Duration is from 1 July 2012 to 31 December 2015. Grant Amount is RM28,427.00.

Chan N W (PI), Narimah Samat and Suriati Ghazali. **Socio-economic Wellbeing: Assessing Total Flood Impacts Via Direct or Indirect and Tangible or Intangible Impacts of Flood Disasters in the Sg Kelantan Basin**. Ministry of Education Fundamental Research Grant Scheme (FRGS) Flood Management Grant 2015. Duration is from 1 April 2015 to 31 December 2015. Grant Amount is RM70,000.00. Account Number 203/PHUMANITI/6711476.

Chan N W (PI), Lee Lai Kuan, Narimah Samat, Aminuddin Ab Ghani and Suriati Ghazali. **Governance for Disaster Risk Reduction: Enhancement of Standard Operating Procedures (SOP) on Flood Disaster Awareness, Preparedness, Warning System, Evacuation Plan & Institutional Arrangements for Flood Risk management in the Sungai Pahang River Basin**. Ministry of Education Transdisciplinary Research Grant Scheme (TRGS) on Flood Management 2015 under the TRGS Programme titled "Flood and Flood Disaster: Integrated Assessment of Extreme Rainfall and Microbial Variability, and Enhancement of Standard Operating Procedures (SOP) for Flood Disaster Awareness: Case Study of Sungai Pahang River Basin. Duration is from 1 April 2015 to 31 December 2015. Grant Amount is RM105,710.00. Account Number 203/PHUMANITI/6767005.

Chan N W (PI) and Seow Ta Wee. **Effects of Floods on Human Society and the Role of Social Capital in Recovery in Malaysia**. Fundamental Research Grant (FRGS) from Ministry of Education. Duration from 1<sup>st</sup> July 2014 to 30 June 2016. Grant amount is RM87,000.00. Account Number 203/PHUMANITI/6711393.

Chan N W (PI) **Environmental Education Via Environmental Quiz for Poor Students in Lower Secondary Schools di Penang State Towards Producing Environmentally Sensitised Citizens**. University-Industry-Community Engagement Grant from Division of Industry & Community Network USM. Duration is from 1<sup>st</sup> August 2014 to 31<sup>st</sup> July 2015. Grant Amount is RM12,000.00.

Syed Zainal Ariff bin Syed Jamaluddin (PI), Chan Ngai Weng and Norizan Md Nor. **Program Kelestarian Bahasa, Tenaga dan Alam Sekitar antara USM dan Sekolah Menengah di Pulau Pinang**. University-Industry-Community Engagement Grant from Division of Industry & Community Network USM. Duration is from 15 August 2014 to 14 August 2015. Grant Amount is RM6,000.00.

Seow Ta Wee (PI), Chan Ngai Weng (Mentor & Co-Researcher), David Martin, Goh Kai Chen & Goh Hui Hwang. **Developing Optimization Model for Solid Waste Management in Johor Bahru City, Johor. Research Acculturation Collaborative Effort (RACE) Fasa 2/2013**. Grant is from Ministry of Higher Education Malaysia. Duration from 9<sup>th</sup> July 2014 to 31<sup>st</sup> December 2014. Grant amount is RM20,000.00 for Mentor. Account Number 1001/PHUMANITI/AUPRM0058.

Sulzakimin Hj Mohamed (PI) and Chan Ngai Weng (Mentor & Co-Researcher). **Enhancing Performance in Malaysia Local Governments Towards Sustainable Development Focussing on Knowledge Transfer Practices Framework. Research Acculturation Collaborative Effort (RACE) Fasa 3/2015**. Grant is from Ministry of Education Malaysia. Duration from 14<sup>th</sup> May 2015 to 15<sup>th</sup> May 2016. Total grant amount is RM10,000.00 for Mentor. Account Number 1001/PHUMANITI/AUPRM00531.

Narimah Samat (PI), Morshidi Sirat, Chan Ngai Weng, Ruslan Rainis, Wan Ruslan ismail, Abdul Fatah Che Hamat, Anisah Lee Abdullah, Norizan Md Nor, Suriati Ghazali, Aishah Knight Abdul Sattar, Asyirah Abdul rahim, Azlinda Azman, Jabil Mapjabil, Khoo Suet Leng, Nooriah Yusof, Saidatulakmal Mohd, Sharifah Rohaya Sheikh Dawood, Wan Mohd Muhyihuddin Wan Ibrahim, Zakaria Bahari, Zikri Mohamad, Zulyadini A Rahaman, Aziz Abdul Majid. **Spatial Inequalities: Framing Phenomena, Formulating Policies. Research University Team Grant**. Duration from 15 July 2013 to 14 July 2017. Grant amount is RM500,000.00.

Chan N W (PI) **"Research on Public Perception, Practices and Commitment Towards Domestic Water Saving in Penang**

**State**", 1 August 2017 to 31 July 2018, totaling RM10,000 (Ten Thousand Ringgit). Grant Account Number 304/PHUMANITI/650906/W109.

Tan Mou Leong (PI), Chan Ngai Weng, Fredolin Tangang@Tajudin Mahmu, Liew Ju Neng, Wan Ruslan Bin Ismail, Zulkifli Yusop, **Framework for assessing Southeast Asia Hydro-Climatic Drought (SEA-HCD)**, FRGS, RM76,200.00, Nombor Akaun 304/PHUMANITI/6711695; 01/01/2019-31/12/2021.

Chan N W (PI), Narimah Samat, Aminuddin Ab Ghani and Nik Norma Nik Hasan. **Modelling the Fundamental Aspects of Community Flood Vulnerability Adaptation and Resilience Towards Climate Change in Kelantan, Malaysia**. FRGS, RM 74,6000.00, Nombor Akaun 203.PHUMANITI.6711693, 1 Jan 2019-31 Dec 2020. Dilanjut ke 31 Dis 2021.

Chan N W (PI), Mella Othman dan Mohd Amirul bin Mahamud. **PGC-WWP water behaviour survey in Penang State. Dana Kerajaan Negeri Pulau Pinang melalui Penang Green Council. Jumlah Geran RM10,000.00,Tempoh Projek 1 Jan 2022-15 Nov 2022.**

Chan N W (PI), Tan M L, Phang WL. **Perai River Pollution Sources Mapping Study**. Funded by Thinkcity, Grant Amount RM30,000.00. Project Duration 31 Aug 2019 - 27 Dec 2021.

Tan M L (PI), Chan, N.W., Chan, D.J.J., Asyirah Binti Abdul Rahim and Yu, K.H. **Drought Adaption Due to Climate Change via Rainfall Harvesting in a School in Water-Stressed Penang**. Universtti Sains Malaysia, Grant funded by Bahagian Penyelidikan & Inovasi, Grant Amount RM11,600.00 Plus M6000.00 from community [Water Watch Penang & SRJK (T) Bayan Lepas], Total Grant RM17,600.00. Project Duration 1 Jul 2021-30 Jun 2022.

Chan N W (PI), Phang W L, Khor H T, Hong C W, Navamney L and Tan M L **Implementing Community Empowerment Program to Improve Livelihoods of Inland Fishing**. Funded by Yayasan Hasanah Foundation, Grant Amout RM180,000.00, Project Duration 1<sup>st</sup> July 2020 to 30<sup>th</sup> April 2021

Chan N W (PI), Narimah Samat, Azizan Sabjan, Tan Mou Leong, Yen Siew Hwa, See Kok Fong and Seow Ta Wee. **"Study of social, cultural and economic aspects of sustainable aquaculture focusing on resource reclamation and reuse of aquaculture effluent" Under the LRGS Research Program titled "Resource Reclamation and Reuse from the Aquaculture Effluent"**, RM817,000.00, Account No. 203/ PHUMANITI/ 67215003; 1 Jan 2019 to 30 June 2023.

See K.F. (PI) and Chan N. W. **Modelling a New Water Tariff Setting Mechanism through Performance Benchmarking Approach**. Approved amount RM54,300.00 Duration 01/11/2020 - 31/10/2022.

### University

Asha Suresh Chand (PI), Soo, L.C. and Chan N W **The Tasik Harapan Clean-up Project Using Effective Microbes (EM)**. Cimb Bank Berhad funded Project worth RM105000.00 (Research Period is 1 August 2010 – 31 March 2011. This project is to be extended for another 6 months with additional funding from Cimb Bank Berhad).

Chan N. W. (PI), Cheok Kian Sheong, Mandy Koay, Edina Crnkic, Tan O.K., Mohamad Abdullah **Responsible Water Consumption Study in USM Saujana Café: A Dishwashing Study Pitting Dishwasher Against Manual Washing by Hand**. Grant sponsored by Reckitt Benckiser (M) Sdn Bhd totalling RM28,200.00. Period of Study is March 2010 to January 2011.

Chan, N.W. (PI), Wan Ruslan Ismail, Abu Talib Ahmad and Ajindar Kaur **"Transforming School of Humanities Into An Example of A Best Management Practice (BMP) in Water Demand Management (WDM) In Terms Of Water Sustainability"**. Universiti Sains Malaysia "Delivering Excellence APEX Budget 2011" Grant. Account Number 1002/PHUMANITI/910301 (Project Duration is 25 March 2011 – 31 December 2011 & Total Grant awarded is RM327,000.00).

Norizan Md Nor (PI), Chan N W, Lee L M, Salfarina et al. **"Delivering Excellence: APEX 2011: An Integrated Approach to Sustainable Rural-Urban Development for Rakyat Sejahtera"**. Universiti Sains Malaysia "Delivering Excellence APEX Budget 2011" Grant (Tempoh Projek ialah 25 Mac 2011 – 31 Disember 2011 & Jumlah Projek Yang diluluskan ialah RM600,000.00).

Tan Mou Leong (PI) and Chan Ngai Weng. **Engaging and educating USM Students and Cleaning Staff in Restu-Saujana-Tekun Hostels in Universiti Sains Malaysia on the importance of water conservation towards water sustainability in USM**. University-Industry-Community Engagement Adhoc Grant from Division of Industry & Community Network USM. Duration is from 1 September 2017 to 31 Disember 2017. Grant Amount is RM1,500.00.

Chan N W (PI), Khairul Rahman Ayub dan Asyirah Abdul Rahim. **Engaging and Educating Nibong Tebal Communities in the Importance of Bio-Ecological Drainage Systems of the USM Engineering Campus in the Control of Water Quality, Floods and Recreation**. University-Industry-Community Engagement Adhoc Grant from Division of Industry & Community Network USM. Duration is from 1 September 2017 to 31 Disember 2017. Grant Amount is RM3,000.00.

Chan N W (PI) **"Universiti Sains Malaysia Water Savings Project 2012-2017"**. Universiti Sains Malaysia Special Project Approved By Vice-Chancellor" (Duration is 7 years from August 2010 to July 2017. Approved Funding came in July 2012 based on PBA Tariff Reduction of Monthly Water Bill of Account Number 570505035917 (Asrama USM Lot 229, 230, 235, 238 and 8944). Account No. 311/PHUMANITI/4117420. Year 1 Budget awarded is RM115,000.00.

## CONSULTANCY PROJECT

**Consultant for the Dewan Bahasa dan Pustaka Malaysia** on the formalising of Bahasa Malaysia Terminology for Universities. Dewan Bahasa dan Pustaka Malaysia, Kuala Lumpur. The length of the consultancy was from 1st January 1987 to 31st August 1991 (National).

**Consultant for the Malaysian Examination Council**, Kuala Lumpur in the preparation of Examination Questions for the STPM Geography Paper 4. (1977 - 1991) (National).

**Consultant for the Malaysian Examination Council**, Kuala Lumpur in the preparation of Marking Schemes and the Marking of STPM Geography Paper 4 examination scripts (1977 - 1991) (National).

**Consultant on the writing of Geography Textbooks for higher learning** at college and university level for the Dewan Bahasa dan Pustaka Malaysia, Kuala Lumpur (1986 - 1995) (National).

**Consultant on the writing of Geography Textbooks for secondary schools** for Pustaka DELTA Sdn. Bhd. Taman Megah, Petaling Jaya (1986 - 1987) (National).

**Erosion, Water Resources and Flooding Consultant for DCT Consultancy Services Sdn Bhd**. 10 Pesiaran Bukit Jambul (College Antarabangsa/International College) 11900 Bayan Lepas, Pulau Pinang. I carried out a study under the Penang Conservation Plan titled *Determining the current status of hill development, soil erosion and coastal erosion, and flooding in Penang; and suggestions for protection of hill land, controlling soil erosion and coastal erosion and flood mitigation for incorporation into the Penang conservation Plan* (1997-1999) (National).

**Soil Erosion, Water Resources and Flood Consultant in the Penang State Chief Minister's Panel of EIA Evaluation Committee.** This committee reviews, evaluates and assesses the credibility of EIA reports submitted for environmentally sensitive development projects. It is based at DCT Consultancy Services Sdn Bhd. 10 Pesiaran Bukit Jambul (College Antarabangsa/International College) 11900 Bayan Lepas, Pulau Pinang. The committee is headed by Dr Leong Yueh Kwong (1996 - 1997) (National).

**Climate, Water Resources and Flood Mitigation Consultant in AR & T Heritage Consultancy Sdn Bhd,** 128 Lebuhr Armenian, 10200 Penang for the project *Kajian Saliran Dan Konsep Pembangunan Untuk Kawasan Barat Pulau Pinang (Drainage and Development Concept For Western Penang Island)*. Consultant for section on Hydrology (July 1998 - May 1999) (National).

**Hydrology Consultant for The Department of Environment Malaysia's "River Classification Project".** I carried out the study and wrote the report on the hydrology of three river basins, viz. the Sg Pinang, Sg Muda and Sg Merbok river basins. Coordinated by Professor Mashhor Mansor of the School of Biological Sciences, USM (August 1998 to August 1999) (National).

**Climatology Consultant in the Malaysian National Committee for Scientific Research on Climate Impacts.** Secretariat at Malaysian Meteorological Service. MMS Headquarters, Jalan Sultan, 46100 Petaling Jaya, Selangor (Since 8 March 1997 - 2000) (National).

**Infrastructure and Water Resources Consultant in the Regional Specialisation Study for States in Malaysia (Kajian Pengkhususan Wilayah Di Malaysia).** A consultancy Project to be carried out for the Economic Planning Unit, Prime Minister's Department Malaysia. Project leader is Assoc. Prof. Dr Morshidi Sirat. I am in charge of the two Sections on *Water Resources* and *Infrastructures* (August 1999 to March 2000) (National).

**Hydrology and Water Resources Consultant in the Project: "Formulation of Guidelines for the Development and Environmental Management of Water Catchment Areas in Penang State".** A consultancy Project to be carried out for Edtech Associates Sdn. Berhad, Analytical Chemists, Environmental & Scientific Consultants, 123-L, Macalister Road, P.O. Box 163, 10720 Penang. I am in charge of formulating guidelines for the Section on Hydrology and Water Resources (June – December 1999) (National).

**Hill Land Development, Water Resources and Flood Mitigation Consultant in the "Penang State Development Plan 2001 – 2010 Study".** An upcoming consultancy project to be carried out for DCT Consultancy Services Sdn Bhd. And Socio-Economic and Environmental Research Institute (SERI). I am in charge of the Sections on Hill Land Development, Water Resources and Hydrology (Flooding) (2000 - 2001) (National).

**Water Resources Consultant for World Wildlife Fund (Malaysia) WWF.** I am consultant to WWF in their "Water For Life" programme (2000 – 2001) (National).

**Water Resources Consultant for the Malaysian Nature Society (MNS).** I am consultant to MNS in their "Water Resources Conservation" programme (1999– 2000) (National).

**Water Resources and Environmental Hazards Consultant in the Geoinformatic Unit, Universiti Sains Malaysia** (Consultant since 2000 til Present) (National).

**Appointed Hydrology and Water Resources Consultant in Edtech Associates Sdn Bhd, 123-L, Macalister Road, P.O. Box 163, 10720 Penang** (23 March 2002 – Present) (National).

**Project Leader & Consultant for Climate, Physical Geography & Hydrology in Edtech Associates Sdn Bhd, 123-L, Macalister Road, P.O. Box 163, 10720 Penang.** For the project "Scientific Assessment of the Impact of the Proposed Helicopter Harvesting Project in Kedah Darul Aman (23 January 2002 – 31 March 2003) (National).

**Project & Study Leader for WWF-Malaysia 2004 Assessment on the Sustainability of Malaysia's Water Resources Utilisation by Using Sustainable Development Indicators (SDI).** This project is carried out by Water Watch Penang for WWF-Malaysia, 49 Jalan SS223/15, 47400 Taman SEA, Petaling Jaya, Selangor D.E., Malaysia (March – July 2004) (National).

**Consultant for the Malaysian Examination Council,** Kuala Lumpur in the preparation of Examination Questions for the STPM Geography Paper 1 (2005 - Present) (National).

**Consultant for the Malaysian Examination Council,** Kuala Lumpur in the Revision & Reorganisation of STPM Geography Paper 942 (Paper 1 & 2) (2004 - Present) (National).

**Consultant Team Leader for the Malaysian Examination Council,** Kuala Lumpur in the marking & co-ordination of marking of Examination Scripts for the STPM Geography 942 Paper 1. Physical Geography (2005 - Present) (National).

**Consultant for the project titled "River Inventory and Monitoring Programme"** managed by the River Engineering and Urban Drainage Research Centre (REDAC), Engineering Campus USM under the contracted work for the Sarawak Rivers' Board (SRB) (2008-2009) (National).

**Consultant to Curriculum Development Section, Ministry of Education Malaysia,** Floor 4-8, Parcel E, Federal Governmental Complex 62604 PUTRAJAYA in Setting the Standard Contents of "Malaysia Negaraku Year 2" (Elements of Geography and Environment) (10 – 12 Mac 2010) (National).

**Consultant to Malaysian Examination Council (Majlis Peperiksaan Malaysia),** Kuala Lumpur in Peperiksaan STPM 2010, STPM Geografi 942 (Kertas 1 & 2) (9 June 2010-Present) (National).

**Review of National Water Resources Policy** appointed by Drainage and Irrigation Department, Kementerian Sumber Asli dan Alam Sekitar Malaysia (7 January – 31 January 2011) (National).

Yasuyuki Sawada (PI), Fukunari Kimura, Sothea Oum, Sommarat Chantarat, Sujata Satapathy, Brent Layton, Mitsuyo Ando, Le Dang Trung, Sann Vathana, Danilo Israel, Jonathan A Lassa, Ngai Weng Chan, Allen Lai Yu Hung, Nipon Poapongsakorn and Pitsom Meethom and Ikumo Isono. **ERIA Research Project 2011 Working Group on "Economic and Welfare Impacts of Disasters in East Asia and Policy Responses".** Awarding Agency is Economic Research Institute for ASEAN and East Asia (ERIA). Duration - 12 Mar 2011-5 Mar 2012. Sub-Project Under me is titled "impacts of disasters and disaster risk management in Malaysia: the case of floods". Total Grant Approved RM22,000.00 (International).

**Consultant (Non-Monetary) to Penang State Government** in the Technical Advisory Committee on Slope Development, Slope Stability & Slope Management Strategies, Penang State Government, December 2013-December 2015 (State).

**Consultant (Community Engagement and Outreach) to Drainage and Irrigation Department Malaysia** in the projek Pelan Pengurusan Lembangan Sungai Bersepadu (IRBM), Sungai Perai, Pulau Pinang/Kedah. 28 December 2017 - 27 December 2018 (National).



**Consultant (River Management and Water Pollution) to Think City Sdn Bhd.** in the projek Kajian Pemetaan Pencemaran Sg Perai, 31 August 2018 - 27 December 2021(State).

**Consultant (Geo-Disasters) to PLANMalaysia (Jabatan Perancangan Bandar dan Desa)** dalam Kajian Rancangan Tempatan Majlis Daerah Bera, Pahang 2035 (Penggantian), 9 May 2022 – 9 May 2023 (National).

## PAPER PRESENTED

### Conference

A total of 550 papers were presented at conferences, seminars, workshops and other forums. Please contact me at [nwchan@usm.my](mailto:nwchan@usm.my) if you need this information.

### Plenary Speaker

A total of 550 papers were presented at conferences, seminars, workshops and other forums. Please contact me at [nwchan@usm.my](mailto:nwchan@usm.my) if you need this information.

### Invited Seminar

A total of 550 papers were presented at conferences, seminars, workshops and other forums. Please contact me at [nwchan@usm.my](mailto:nwchan@usm.my) if you need this information.

### Invited Speaker

A total of 550 papers were presented at conferences, seminars, workshops and other forums. Please contact me at [nwchan@usm.my](mailto:nwchan@usm.my) if you need this information.

### Event Organiser

Committee Member, Local Organising Committee, National Conference on Preservation and Promotion of Heritage, 24-26 November 2010, Penang, Malaysia (1 January 2010- 26 November 2010)

Committee Member, Local Organising Committee, 3<sup>rd</sup> International Conference on Managing Rivers in the 21<sup>st</sup> Century: Sustainable Solutions for Global Crisis of Flooding, Pollution and Water Scarcity, 6-9 December 2011, Penang, Malaysia (1 Jan 2010-9 Dec 2011)

Organising Chairman, National Final Conference on "The Natural Heritage of Northern Peninsular Malaysia", 2-3 August 2010, Equatorial Hotel Penang (1 January 2010-3 August 2010)

Organising Chairman, National Conference on "The Natural Heritage of Northern Peninsular Malaysia", 5-6 October 2009, Equatorial Hotel Penang (1 January 2009-6 October 2009)

Committee Member, Local Organising Committee, National Conference on Preservation and Promotion of Heritage, 24-26 November 2010, Penang, Malaysia (1 January 2010-9 26 November 2010)

Committee Member, Penang State Committee on Malaysia Environmental Week (Penang State Level), May-August 2007, Penang State, Organised by Department of Environment Malaysia and Penang State Government (Department of Tourism Development & Environment) (May-August 2007)

Committee Member, National Committee on 2nd International Conference on "Managing Rivers in the 21st Century: Solutions towards Sustainable River Basin", 6th - 8th June 2007, Kuching, Sarawak, Malaysia. Organised by River Engineering & Urban Drainage Research Centre (REDAC), USM (2007).

Committee Member, National Conference on National Heritage, Universiti Sains Malaysia (25 January 2010 – 26 November 2010)

Committee Member, Workshop on "Future Directions of School of Humanities USM (30 May 2005 –21 June 2005)

Organising Chairma, Organised an International Seminar titled "Sustainable Development of Cameron Highlands: Issues & Challenges", 11-12 Disember 2004, Brinchang, Cameron Highlands. Co-sponsored by The British Council DFID Higher Education Links & School of Humanities USM.

Organising Chairman, Organised "An Introductory Course in Ecotourism", 6 Disember 2004, School of Humanities, Universiti Sains Malaysia. Co-sponsored by The British Council DFID Higher Education Links& School of Humanities USM.

Organising Chairman, Organised a Course titled "An Introductory Course in Ecotourism", School of Humanities, Universiti Sains Malaysia. Co-sponsored by The British Council DFID Higher Education Links and School of Humanities USM (11 December 2003)

Organising Committee, "1<sup>st</sup> International Conference on Managing Rivers in the 21<sup>st</sup> Century: Issues & Challenges", 21 – 23 September 2004, Pulau Pinang. Jointly organized by REDAC Universiti Sains Malaysia, DID, MANCID, Humid Tropics Centre KL, LESTARI, UiTM, NAHRIM and International Association of Hydraulic Engineering and Reserch (January 2003 – Septemver 2004).

Organising Committee & Session Convenor, International Conference "Southeast Asia Since 1945: Reflections and Visions", 20 – 23 July 2004, Pulau Pinang, Malaysia. Organised by Asia Pacific Research Unit, Pusat Pengajian Ilmu Kemanusiaan, Universiti Sains Malaysia (January 2003 – July 2004).

Organising Committee, "Geography Day", 23 June 2004, School of Humanities USM, Pulau Pinang, Malaysia. Jointly organised by Geography Section, School of Humanities USM and National Geographical Association of Malaysia (23 June 2004).

Secretary, National Conference on "Rivers '99: Towards Sustainable Development", Jointly organised by Universiti Sains Malaysia and the Drainage and Irrigation Department Malaysia, 14-17 Oct 1999, Conference Hall, Universiti Sains Malaysia, Penang.

Committee Member, Organising Committee, Forum "Current Economic Crisis - Malaysian Responses" Jointly organised by The School of Social Sciences, The School of Management and The Academic and Administrative Staff Association Universiti Sains Malaysia, 1<sup>st</sup> March 1998, Dewan Budaya, Universiti Sains Malaysia, Penang.

Organising Chairman, 13<sup>th</sup> International Academic Consortium for Sustainable Cities (IACSC) 2022, 12<sup>th</sup> – 13<sup>th</sup> September 2022, Theme "Sustainable Urban Living in a Covid-19 & Climate Change Environment" (Online).

Organising Chairman, International conference on advances in environmental research, Nanyang Technological University Singapore. Organised by Hong Kong Chemical, Biological & Environmental Engineering Society, 24-26 March 2023 9<sup>th</sup> International Conference on Advances in Environment Research (ICAER 2023) (International).

Oral Presenter

Poster Presenter

Presenter

Keynote Speaker

(2010) *Impacts of Human Habitat Development on the Environment – Challenges and the Way Forward*. Keynote Paper in Jamaluddin Md. Jahi, Muhammad Rizal Razman, Azahan Awang, Kadaruddin Aiyub and Kadar Ariffin (Editors) *Human Habitat Transformation and Environmental Change*, Proceedings of The 2<sup>nd</sup> International Conference on Human Habitat and Environment, 15-16 June 2010, Putra Nilai, Negeri Sembilan. Bangi: Institute of the Malay World and Civilisation (ATMA), UKM and Environmental Management Society (EMS) Malaysia, 3-24.

(1998) *From Rain to Drain and Back Again*. Local Seminar – "Protecting and Managing Fresh Water". Capacity Building Seminars on Critical Issues in the Urban Environment, 28 November 1998, Pusat Pengembangan Sumber Manusia Majlis Perbandaran Petaling Jaya, Selangor, Malaysia. Organised by Environment Protection Society Malaysia (EPSM) and Danish Cooperation for Environment and Development (DANCED).

(2004) *An Overview on Flood Management in Malaysia* International Conference "ICHE 2004 – The Sixth International Conference on Hydro-Science and Engineering", 30 May – 3 June 2004, Brisbane. Organized by National Centre for Computational Hydroscience and Engineering, The University of Mississippi.

(2004) *Managing Water Resources in the 21<sup>st</sup> Century: Involving All Stakeholders Towards Sustainable Water Resources Management in Malaysia*. Local Seminar of Environmental Management Programme, Centre For Postgraduate Studies, Universiti Kebangsaan Malaysia, 15 September 2004, Bangi. Organised by Environmental Management Programme, Centre for Graduate Studies, Universiti Kebangsaan Malaysia.

(2004) *Sustainable River Management in Malaysia: Involving All Stakeholders*. International Conference "1<sup>st</sup> International Conference on Managing Rivers in the 21<sup>st</sup> Century: Issues & Challenges", 21 – 23 September 2004, Pulau Pinang. Jointly organized by Universiti Sains Malaysia, DID, MANCID, Humid Tropics Centre KL, LESTARI, UiTM, NAHRIM and International Association of Hydraulic Engineering and Research.

(2005) "Forestry and Highland Development in Peninsular Malaysia: Issues & Challenges". International Conference "MSA Golden Jubilee International Science Congress (ISC) 2005 – "Science for Humanity", 3-6 August 2005, PWTC, Kuala Lumpur, Malaysia. Organised by Malaysian Scientific Association (MSA)

(2005) Local Seminar "Seminar on Environment During Postgraduate Week of Universiti Kebangsaan Malaysia", 22 July 2005, Bangi, Malaysia. Invited to present a Keynote Paper titled "Sustainable Management of Rivers in Malaysia: Issues and Challenges". Organised by Centre of Postgraduate Studies, Universiti Kebangsaan Malaysia

(2005) National Seminar on Field Work "Curriculum, Procedure and Application in Geography", 17-18 August 2005, Universiti Sains Malaysia, Penang, Malaysia. Invited to present a Keynote Paper titled "Fieldwork Methodology in River Studies in Physical Geography" Organised by School of Humanities, Universiti Sains Malaysia.

(2005) International Forum on Urban Environmental Management in Southeast Asia, 18-19 August 2005, Asian Institute of Technology, Bangkok, Thailand. Invited to present a Keynote Paper titled "*Water and Sanitation Policies in Malaysia: Issues and Challenges*". Organised by SIT in collaboration with CIDA/AIT Southeast Asia Urban Environmental Management Applications (SEA-UEMA) Project and UNESCAP.

(2007) Regional Training of Trainers (TOT) Course on Integration of Human Values-Based Water, Sanitation and Hygiene Education (HVWSHE) Lessons in Southeast Asian Schools, 16-25 May 2007, SEAMEO RECSAM, Gelugor, Penang, Malaysia. Invited to present a Keynote Paper titled "Thematic Strand 3: Water, Human Dignity and Social Equity"

(2007) International Conference 8<sup>th</sup> International Joint World Cultural Tourism Conference 2007, 16-18 November Busan. Invited to present the Keynote Paper "*Developing Clan Jetties as Heritage Buildings for Conservation and Tourism in Penang*".

(2008) National Echo Training Course on Integration of Human Values-based Water, Sanitation and Hygiene Education (HVWSHE), 29-31 Jan 2008, SEAMEO RECSAM, Gelugor, Penang, Malaysia. Invited to present a Keynote Paper titled "Thematic Strand 1: Water and Education for Sustainable Development & Thematic Strand 3: Water, Human Dignity and Social Equity"

(2008) Local Governmental Dialog "Majlis Dialog Kemena River Stakeholders' Initiative, Bintulu Development Authority, Sarawak, 29 February 2008". Organised by Sarawak Rivers Board and Bintulu Development Authority. Invited to present a keynote paper titled "Kemena River Stakeholders' Initiative Programme".

(2008) 2<sup>nd</sup> National Conference on Society, Space & Environment 2008 "Towards Sustainable Heritage & Future", 2-3 June 2009, School of Humanities, Universiti Sains Malaysia, Penang. Invited to present a Keynote Closing Paper titled *Sustainable Water Resources Management Involving Government, Private Sector & Civil Society: The Way Forward*.

(2010) *Impacts of Human Habitat Development on the Environment – Challenges and the Way Forward*. Invited Keynote Paper presented in the 2<sup>nd</sup> International Conference on Human Habitat and Environment, 15-16 June 2010, Putra Nilai, Negeri Sembilan. Organised by Institute of the Malay World and Civilisation (ATMA), UKM and Environmental Management Society (EMS) Malaysia.

(2010) *Examples of Best Management Practices in Water Demand Management & Role of Smart-Partnerships Between Government, Private Sector & Civil Society*. Invited Keynote Paper presented in the Aqua Save Workshop & Exhibition, 25 June 2010, Auditorium Penang Skills Development Centre (PSDC), Bayan Lepas, Penang. Organised by Perbadanan Bekalan Air Pulau Pinang Sdn Bhd.

(2010) "Water Demand Management (Nega-Litres) Demonstration Project at N-PARK Condominium BMP Project: A Smart-Partnership Pilot Project on IWRM Involving Government-Private Sector-NGO-Local Community". Keynote paper presented at **National Seminar/Workshop on Integrated Water Resources Management (IWRM) "Making IWRM Work at Local Level" - "Lessons Learnt", 25 Oktober 2010, Tanjung Bungah Hotel, Penang.**

(2011) "Water Efficiency Management: for Business and Domestic Sectors towards a Green Economy". Keynote Paper presented at **Seminar on "Narmada-The Lifeline", 22 March 2011, Gandinagar (Gujarat), India.**

(2011) "Water Efficiency Management: for Business Sectors from Green Aspects". Keynote Paper presented at **Green Profits Conference, Green Solutions Tradeshow and Conference, 24-26 March 2011, PISA, Penang.**

(2011) "Water Services: The Concerns". Keynote Paper presented at the **Malaysian Water Association's Water Malaysia 2011, 5-7 April 2011, Putra World Trade Centre, Kuala Lumpur.**

(2012) "Awareness of Environmental Issues & Reality." Keynote Paper presented at the **International Environment and Health Conference 2012, 6-7 June 2012, Vistana Hotel, Penang, Malaysia.**

(2013) Water - Issues and Conservation in the Asian Region: Benefits & Challenges in the School of Humanities Universiti Sains Malaysia Water Saving Project. Invited Keynote Paper presented at the **International Sustainable Campus Network (ISCN) 2013, Working Group 1 Program as of June 12, 2013, National University of Singapore, Buildings and their sustainability impacts.**

(2016) Issues and challenges for water resources and hazards management in Malaysia: the way forward. Keynote Paper presented at the **Asia Pacific Chemical, Biological and Environmental Engineering Society (APCBEEES) International Conference, 12-13 January, Hottel Royal, Penang, Malaysia.**

(2016) Effective River Management: The Key for Maintaining Good Water Quality and Sustainable Water Resources in Malaysia. Keynote Paper presented at the **Asia Pacific Chemical, Biological and Environmental Engineering Society (APCBEEES) Kuala Lumpur International Conference, 25-26 July 2016, Hotel Royal, Kuala Lumpur.**

(2016) Sustainable River Management for Healthy Tourism and Healthy Environment: Engaging All Stakeholders. Keynote Paper presented (Presented by Md. Monir Hussein) at the **International Conference on Sustainable River Management for Healthy Tourism & Healthy Environment, 18-19 November 2016, Coxsbazar, Bangladesh.**

(2017) Urbanization, climate change and cities: challenges and opportunities for sustainable development. Keynote Paper presented at the **2017 Asia Pacific Chemical, Biological and Environmental Engineering Society International Conference, 8-10 January, Universiti Sains Malaysia, Penang.**

(2017) Keynote Paper presented at the **2017 Hong Kong Chemical, Biological & Environmental Engineering Society (HKCBEEES) Beijing Conference, 23-25 May 2017, Jinma Hotel, Beijing.**

(2018) Keynote Speaker, COMBINING ENGINEERING MEASURES WITH SOCIAL RESILIENCE IN COPING WITH URBAN FLOODS IN MALAYSIA, Phuket, HKCBEEES, 2018 8th International Conference on Future Environment and Energy (ICFEE 2018) (International).

(2018) Keynote Speaker, Enhancing Biomass Energy Production Towards Stabilising Climate: Case Study of Malaysia, ICAER 2018 Hong Kong, Hong Kong Chemical, Biological and Environmental Engineering Society, International Conference on Advances in Environmental Research, Hong Kong, 28-30 May 2018 (International).

(2018) Keynote Speaker, Combining Engineering Measures With Social Resilience in Coping With Urban Floods in Malaysia, 2018 8th International Conference on Future Environment and Energy, Phuket, 10-12 January 2018, Hong Kong Chemical, Biological and Environmental Engineering Society, 2018 8th Int. Conf. on Future Environment and Energy, Phuket, 10-12 Jan 2018 (International).

Chan, N.W. (2018) Keynote Speaker, Water Education: Are We Ignorant?, Dewan Seri Melati, Putrajaya, Malaysian Water Partnership, 4th MALAYSIA WATER RESOURCES MANAGEMENT FORUM 2018 25-26 September 2018 SHARING WATER (National).

(2018) Panelist in 1st International Youth Forum on Water Engineering Management (InYouF 2018), 2018 (International)

(2019) Keynote Speaker, Sustainable urban drainage as a viable measure of coping with heat and floods due to climate change, OSAKA, JAPAN, HONG KONG CHEMICAL, BIOLOGICAL & ENVIRONMENTAL ENGINEERING SOCIETY, 2019 9TH INTERNATIONAL CONFERENCE ON FUTURE ENVIRONMENT AND ENERGY (International)

(2019) Keynote Speaker, Holistic Urban Water Management Integrating Rainfall Harvesting, Water Conservation and Sustainable Drainage Systems in Universiti Sains Malaysia, NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE, HONG KONG CHEMICAL, BIOLOGICAL & ENVIRONMENTAL ENGINEERING SOCIETY, 2019 5th International Conference on Advances in Environment Research (ICAER 2019) (International).

(2019) Keynote Speaker, INTERNATIONAL CONFERENCE ON ADVANCES IN ENVIRONMENTAL RESEARCH, NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE, HONG KONG CHEMICAL, BIOLOGICAL & ENVIRONMENTAL ENGINEERING SOCIETY, 2019 5th International Conference on Advances in Environment Research (ICAER 2019) (International).

(2022) Keynote Speaker, INTERNATIONAL CONFERENCE ON ADVANCES IN ENVIRONMENTAL RESEARCH, NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE, HONG KONG CHEMICAL, BIOLOGICAL & ENVIRONMENTAL ENGINEERING SOCIETY, 22-24 April 2022 8<sup>th</sup> International Conference on Advances in Environment Research (ICAER 2022) (International).

(2022) Keynote Speaker, Internatinal Conference on Society, Space & Environment (ICSSE) 2022, 16 Nov 2022, School of Humanities USM. Delivered the paper titled "Holistic Management of Urban Hazards & Disasters Via Enhancing Resilience in Cities & Communities"

## ACADEMIC/PROF. SERVICES

### Evaluation

#### EVALUATION OF CENTRES/SCHOOLS/CANDIDATES

##### Programme/Centres/Schools/etc:

1. Evaluated the Environmental Management Programme, Postgraduate Centre, Universiti Kebangsaan Malaysia, 2005 as Externer Evaluator.
2. Evaluated the Environmental Management Programme, Universiti Tun Hussein Onn Malaysia (UTHM), 2007 as Panelist.

##### Externer Assessor of the Post of Professor for the following candidates:

1. Associate Profesor Dr Shaharuddin Ahmad, Universiti Kebangsaan Malaysia, 2005.
2. Associate Profesor Dr Fredolin Tangang, Universiti Kebangsaan Malaysia, 2007.
3. Associate Profesor Dr. Ramzah Dambul, Uiversiti Malaysia Sabah 2018
4. Associate Profesor Dr Kadir Arifin, Universiti Kebangsaan Malaysia, 2018
5. Associate Profesor Dr Sharifah Zarina Syed Zakaria, Universiti Kebangsaan Malaysia, 2018
- 6 Associate Profesor Dr Sharifah Zarina Syed Zakaria, Universiti Kebangsaan Malaysia, 2019
7. Associate Professor Ts. Dr. Lee Khai Ern, Universiti Kebangsaan Malaysia, 2022

##### Referee Assessor of the Post of Professor for the following candidates:

1. Professor Dr Muhammad Barzani Gasi, Universiti Kebangsaan Malaysia 2011.
2. Professor Dr Mohd. Ekhwan Toriman, Universiti Kebangsaan Malaysia 2011.

##### Externer Assessor of the Post of Associate Professor for the following candidates:

- 1.Dr Noorazuan Md Hashim, Universiti Kebangsaan Malaysia, 2008.
- 2.Dr Sharifah Mastura, Universiti Kebangsaan Malaysia, 2008.
- 3.Dr Kadir Ariffin, Universiti Kebangsaan Malaysia, 2010.
- 4.Dr Suhaily Yusri Che Ngah, Universiti Pendidikan Sultan Idris, 2010.
- 5.Dr Er Ah Choy, Universiti Kebangsaan Malaysia, 2011.
- 6 Dr Baharudin Bin Hj Md Arus, Universiti Sains Malaysia, 2014
- 7 Dr Haryati Binti Shafii, Universiti Tun Hussein Onn, 2014
- 8.Dr Nasir Bin Nayan, Universiti Pendidikan Sultan Idris, 2014
- 9 Dr Sharifah Munirah Al-latas, Universiti Kebangsaan Malaysia, 2014
- 10 Dr Tuan Pah Rokiah Syed Hussein, Universiti Utara Malaysia, 2014
- 11 Dr Mohd Hairy Bin Ibrahim, Universiti Pendidikan Sultan Idris, 2017
- 12 Dr Sulzakimin Bin Mohamed, Universiti Tun Hussein Onn, 2018
- 13 Dr Majed Mahmoud Faris Ibrahim, Al-Bayt University, Jordan 2019
14. Dr Wong Yee Shian, Associate Professor in Universiti Malaysia Perlis, 2019.

##### Evaluator/Examiner for the following PhD Candidates:

Ahmed Suleiman Mustafa (A 5786) Incorporating Local Level Market Behaviour into Early Warning and Food Information Systems: The Case of the Semi Arid Zone in Sudan. PhD (Universiti Kebangsaan Malaysia) (External Examiner, National) 2000

Ahmed Hamed Ibrahim, PhD (Universiti Kebangsaan Malaysia) (External Examiner, National) 2002

Mohamed Elnour Yassen Ahmed (P24089) Aspects of Climate Change, Air Quality Degradation and Acid (Universiti Kebangsaan Malaysia) (External Examiner, National) 2004

- Zullyadini A Rahaman (Imbangan Endapan Dan Pemendapan Di Empangan Timah Tasoh, Perlis, Malaysia) (Universiti Sains Malaysia) (Internal Examiner, National) 2004
- Abdul Hamid (GS10531) Characterisation of Stormwater Quality From The Sungai Lui Catchment) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2005
- Liew Ju Neng (P22053) Variasi Antara Tahunan Hujan Di Malaysia – Modulasi ENSO Dan Teknik-Teknik Pemodelan) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2006
- Haryati binti Shafii (P17972) Tempat Tinggal Dan Kualiti Hidup Masyarakat Bandar Di Kajang, Selangor) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2006
- Rahmah Elfithri (P18867) Pembuatan Keputusan Kolaboratif Dalam Konteks Pengurusan Sumber Air Bersepadu) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2006
- Sanar Kumaran A/L Kolandai (GS11988) Hydrometeorology of Tropical Montane Rainforests of Gunung Brinchang, Pahang Darul Makmur) (Universiti Putra Malaysia) (External Examiner, National) 2008
- Seow Ta Wee (P17886) Pengurusan Sisa Pepejal di Daerah Batu Pahat, Johor: Ke Arah Pembentukan Bandar Berdayahuni) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2008
- Tuan Pah Rokiah Syed Hussain (P35013) Gangguan Manusai Dan Pengaruhnya Terhadap Kejadian Banjir Di Lembangan Saliran Kelantan) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2010
- Dessy Yoswati, (Universiti Kebangsaan Malaysia) (External Examiner, National) 2011
- Nik Nasriah binti Che Abdul Rahman (Pengaruh keterdapatan air terhadap gerakan jisim: kajian tanah runtuh di mukim Hulu Kelang, Selangor, Malaysia) (Universiti Malaya) (External Examiner, National) 2011
- Thanapackiam a/p Periasamy (Slope failure hazards: a spatial and temporal study of the Klang Valley Region, Peninsular Malaysia) (Universiti Malaya) (External Examiner, National) 2011
- Nasir bin Nayan (P44971) Impak Pembangunan Guna Tanah Terhadap Zon Pinggir Pantai Di Negeri Perak) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2012
- Abd. Wahid bin Rasib, (Universiti Teknologi Malaysia) (External Examiner, National) 2012
- Dr. Sumitra Sithamparam (Vulnerability Analysis of Flood Risk and Disaster Management in Freetown, Sierra Leone) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2012
- Afolabi Oluwafemi Alabi (Tajuk: Dynamic Simulation Modelling For Water quality Management in Lake Chini) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2012
- Maged Ahmed Abdullah Alward (Tajuk: Assessment of Water Resources and Its Management in Wadi Siham Basin, Yemen) (Universiti Sains Malaysia) (Internal Examiner, University) 2012
- Hamidi Bin Ismail (Tajuk: Sistem Pengurusan Alam Sekitar Bandar dalam Majlis Perbandaran Kajang dan Majlis Perbandaran Seremban) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2013
- Hanifah Binti Mahat (Title: Kesedaran dan Komitmen Pendidikan Pembangunan Lestari Dalam Komuniti Sekolah Menerusi Program Sekolah Lestari) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2013
- Zarrintaj Aminrad (Title: The Integration of Environmental Awareness, Knowledge and Attitude in Formal Education Regarding Secondary School Students: A Case Study in Kajang, Selangor) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2013
- Sulzakimin Bin Hj. Mohamed (Title: Malaysian Local Government Towards Sustainable Development: Knowledge Transfer Practices Framework in Planning Approval") (Universiti Tun Hussein Onn Malaysia) (External Examiner, National) 2014
- Rosmini Maru (Title: Kuantifikasi Intensiti Pulau Haba Bandar (IPHB): Kajian Kes di Bandaraya Jakarta) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2014
- Mohd Khairul Amri Kamaruddin (Title: Siasatan Perubahan Pelan Sungai Dan Bentuk Geometrik Dasar Sungai Dalam Penentuan Pengurusan Sungai Di Sungai Pahang, Malaysia) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2014
- Mohd Hairy Bin Ibrahim (Title: Perubahan Atmosfera Bandar dan Kesannya Di Bandar Raya Ipoh, Perak) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2014
- Tan Mou Leong (Title: Evaluation of Uncertainties on Modelling of Streamflow Effects by Climate Change) (Universiti Teknologi Malaysia) (External Examiner, National) 2015
- Ali Nikahd Ghosiraie (Title: Calibration of Ground-Based Radar For Rainfall Measurement) (Universiti Teknologi Malaysia) (External Examiner, National) 2015
- Nazi Avani (Title: The Distribution and Strength of Vegetation Roots in Relation to Soil Reinforcement along East-West Highway, Malaysia) (Universiti Sains Malaysia) (Internal Examiner, University) 2015

Abdul-Wahab Shuaibu (Title: A Structural Equation Modelling Approach to Factors Influencing Adoption of Urban Self-Supply Water System in Yola, Nigeria") (Universiti Teknologi Malaysia) (External Examiner, National) 2017

Md Zakir Md Salleh (Penggunaan Baja Organoseep Terhadap Prestasi Pertumbuhan, Produktiviti Dan Pengurusan Penanaman Pokok Tomato (*Solanum lycopersicum*) (Universiti Tun Hussein Onn Malaysia) (External Examiner, National) 2017

Zitty Sarah Ismail (Pembentukan Budaya Keselamatan Universiti Penyelidikan di Malaysia) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2017

Nik Mohd Farhan (Potensi Spesies *Syzygium papilose*, *Ploiarium alternifolium melchior* dan *Cratoxylon arborescens* dalam proses ka walan hakisan cerun) (Universiti Pendidikan Sultan Idris) (External Examiner, National) 2017

Mazlina Bt Alang Othman (Determination of Water Quality Volume in Stormwater Facilities) (Universiti Sains Malaysia) (Internal Examiner, University) 2017

Madya Herawati Binti Ahmad (Penyertaan Pihak Awam Terhadap Prosedur EIA Terperinci Berhubung Projek Petrokimia Di Pengerang Johor) (Universiti Tun Hussein Onn Malaysia) (External Examiner, National) 2017

Mohd Reduan Bin Buyung (Membangunkan Garis Panduan Kemudahan Bagi Kolej Kediaman Universiti Lestari di Malaysia) (Universiti Tun Hussein Onn Malaysia) (External Examiner, National) 2017

Mabroka Mohamed Daw (Spatial .Analysis of the determinants of urban residential water demand in Libya) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2017

Minhaz Farid Ahmed (Risk Based Assessment and Management of Drinking Water in Langat River Basin, Malaysia) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2018

Gajikoh Mohamed Sellu (Vulnerability Analysis of Flood Risk and Disaster Management in Freetown, Sierra Leone: A Community Flood Disaster Management Approach) (International Islamic Universiti Malaysia) (External Examiner, National) 2018

Mani Rajan A/L Ellapan (Sikap, Inisiatif dan Regulasi Kendiri Pentadbir terhadap Pelaksanaan Pendidikan Pembangunan Lestari di Institut Pendidikan Guru Malaysia) (Universiti Pendidikan Sultan Idris) (External Examiner, National) 2018

Koh Liew See (Pemodelan Pengurusan Bekalan Air Domestik semasa Bencana Banjir di Malaysia: Kajian Kes Kuala Krai, Kelantan) (Universiti Pendidikan Sultan Idris) (External Examiner, National) 2018

Abubakar Umar Gabrain (Standard Operating Procedure for Rescue Operation in Man-made Disaster Management) (Universiti Tun Hussein Onn Malaysia) (External Examiner, National) 2018

Mohd Hilmi B P Ramli (Hasilan Air dan Pengurusan Sumber Air Kawasan Tadahan di Kelantan dengan Menggunakan Teknik Remote Sensing) (Universiti Teknologi Malaysia) (External Examiner, National) 2018

Muhammad Adzran Bin Che Mustapha (Perilaku berniat pihak berkepentingan utama di Lembah Klang terhadap genetik perubatan dan faktor peramalnya) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2019

Shawal Bin Sahid Hamid @ Hussain (Pelaksanaan Pengurusan Keselamatan dan Kesihatan Pekerjaan di Sekolah Semenanjung Malaysia) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2019

Mohamad Syafiqi Hasim (Flood Vulnerability and Flood Risk: Evidence from Flood-hit Households in the east coast region of Malaysia) (Universiti Utara Malaysia) (External Examiner, National) 2019

Sharif Shofirun Ali, (Universiti Kebangsaan Malaysia) (External Examiner, National) 2019

Mohd Azhar Bin Mohamed Ali (Penglibatan Awam Dalam Rancangan Tempatan Pihak Berkuasa Tempatan Di Selangor) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2019

Amirul Shazli Bin Sahimi (Pengaruh Kewangan Dalam Pengurusan Keselamatan Dan Kesihatan Pekerjaan Dalam PKS Di Malaysia) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2020

Ng Lee Shan (Development of sustainable 3R-based construction waste management framework for Penang) (Universiti Tun Hussein Onn Malaysia) (External Examiner, National) 2021

Ir Wan Mohammad Zaidi Bin Wan Isa (P94244)(Pengurusan risiko kemalangan jabatan bomba dan penyelamat malaysia dalam operasi pemadaman kebakaran di Lembah Klang) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2021

Chandan Raj (Roll No. 165CE13; Enrolment No. 160898) (Effects of Farakka Barrage on Morphological Characteristics of the Ganga River) (National Institute of Technology Patna Bihar-800005, India) (External Examiner, International) 2021

Vishal Singh Rawat (Roll No. 185CE33) (Experimental Study on Hydraulic Properties for flows over Inclined Block Carpets) (National Institute of Technology Patna Bihar-800005, India) (External Examiner, International) 2022

Mohamad Ihsan Bin Muhamad Ismail (P20162001695)(Kesan Partikel Terampai (PM10) Kepada Parameter Meteorologi Dan Simptom Masalah Pernafasan Di Ipoh, Perak) (Universiti Pendidikan Sultan Idris) (External Examiner, National) 2022

Supriya Kumari (Roll Number 185AR02)(Critical Evaluation of Residential Satisfaction in Low-Income Group Public Housing of India: A Case of Lucknow City) (National Institute of Technology Patna Bihar-800005, India) (External Examiner, International) 2022

Aadil Towheed (Roll Number 175CE01) (Monitoring the dynamic behavior of soil loss due to climate change in the Kosi river basin, Bihar) (National Institute of Technology Patna Bihar-800005, India) (External Examiner, International) 2022

Shashi Shankar Ojha (Roll No. 15CE251) (Hydrogeological and Meteorological Data Analysis of the Punpun River Basin in India) (National Institute of Technology Patna Bihar-800005, India) (External Examiner, International) 2023

Shashi Ranjan (Roll No. 185CE26) (Assessing long-term hydrological response of Punpun river basin) (National Institute of Technology Patna Bihar-800005, India) (External Examiner, International) 2023

Wen Gangming (Student ID: 202009060039) (The Determinants of International Evaluation Index System to Evaluate the Internationalization of Degree Programs of Guangdong Local Universities) (City University Malaysia) (External Examiner, National) 2023

Cui Lei (Student ID: 202107010017) (The Influence of Individual Temperament and Blended Learning Mode on Wisdom Education Among Undergraduates in Jinan, Shandong Province, China) (City University Malaysia) (External Examiner, National) 2023

Zheng Luyan (Student ID: 20210106046) (Examining the effects of "SPOC and flipped classroom" based blended teaching strategy on first-year english-major students' achievements and learning satisfaction) (City University Malaysia) (External Examiner, National) 2023

Kartik Srivastava (Roll No. 205AR001) Critical analysis of side frictional impact on urban road network: A case study of Varanasi (National Institute of Technology Patna Bihar-800005, India) (External Examiner, International) 2023

Amar Nath Gupta (Roll No 17CE004) "Evaluation of water quality and identification of associated contaminants of uranium using bayesian correlations and machine learning algorithm" (National Institute of Technology Patna Bihar-800005, India) (External Examiner, International) 2024

Zhai Xiuzhi (Student ID: 202109060073) (The influence of multimodal teaching and learning for vocabulary acquisition in primary school English teaching in Beijing, China) (City University Malaysia) (External Examiner, National) 2024

Kowkuntla Rama Krishna Reddy 18CEO06) (Numerical modelling of soil wetting pattern in drip irrigation) (National Institute of Technology Patna Bihar-800005, India) (External Examiner, International) 2024

Fei Zhong (202205060035) (The Relationship between Educational Assortative Mating and Fertility: Evidence from Zhejiang Province) (City University Malaysia) (External Examiner, National) 2024

Huang Chaoping (202205010002) (The effect of teachers' digital literacy improvement and performance on blended learning among students in vocational colleges , Guangdong Province) (City University Malaysia) (External Examiner, National) 2024

**Evaluator/Examiner for the following Masters Candidates:**

Pat Sears (Major Issues and Concerns of the Mekong River, An International River) MSc (The University of Memphis, USA) (External Examiner, International) 2001

Sahak Bin Ahmadun (A 7334) Kesan Pembangunan Di Kawasan Majlis Perbandaran Seremban (MPS) Negeri Sembilan Terhadap Kualiti Air Sungai Linggi) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2003

Kamarul bin Ismail (Integrasi Sistem maklumat Geografi (GIS) dan Rangkaian Saraf Buatan (ANN) bagi Pemodelan Indeks Kualiti Air Sungai: Kajian Kes di Lembangan Sungai Pinang, Pulau Pinang) (Internal Examiner, University) 2003

Cheng Ling Liang (P21074) Ayunan Intra Musiman Dan Hubungkaitnya Dengan Anomali Kerpasan Di Malaysia. (Universiti Kebangsaan Malaysia) (External Examiner, National) 2004

Jamalia Jenni (Krisis air di Lembah Kelang tahun 1998: satu analisis kritikal) (University of Malaya) (External Examiner, National) 2004

Ahmed Hamood Hamed Al-Qasmi ((P32690) Environmental and Economic Benefits of Using Domestic Wastewater for Irrigating Home Gardens In The Sultanate Of Oman) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2006

Tan Choon Chek ((P30402) bertajuk "Pencirian Sifat Fiziko-Kimia Lembangan Tasik Chini, Pahang") (Universiti Kebangsaan Malaysia) (External Examiner, National) 2007

Faidrullah Bin Sheik Naimullah (Pengesahan Kawasan Berisiko Mengalami Kebocoran Paip Menggunakan Kaedah Remote Sensing dan Sistem Maklumat Geografi) (Universiti Teknologi Malaysia) (External Examiner, National) 2008

Hamdan Bin Omar (Analysis of Slope Stability Using Remote Sensing and GIS" pada 7 Ogos 2009 Yang Tidak Dibayar) (Universiti Teknologi Malaysia) (External Examiner, National) 2009

Mukhlisah Binti Hanafi @Mohd Ghani (Universiti Sains Malaysia) (Internal Examiner, University) 2009

Md. Abdullah Abraham Hossain ((P43951) bertajuk Implementation of Integrated River Basin Management Under Local Context: A Case of Langat River Basin) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2010

Nor Anisah Hj. Kadri ((P37120) bertajuk "Kajian Terhadap Impak Sosial Dan Persekitaran Dalam Pengurusan Dan Penggunaan Pestisid Di Ladang Kelapa Sawit Di Tawau, Sabah) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2011

- Mohd Rizaludin Bin Mahmud (Run-off modeling and mapping using satellite data) (Universiti Teknologi Malaysia) (External Examiner, National) 2011
- Mohammad Ghazi bin Hj. Ismail (Penglibatan masyarakat awam di Malaysia dalam isu-isu berkaitan persekitaran dengan rujukan kepada Negeri Kelantan) (Universiti Sains Malaysia) (Internal Examiner, University) 2011
- Syarilla Binti Hj. Mohamas Suhaili, (Universiti Sains Malaysia) (Internal Examiner, University) 2011
- Pan Ia Lun ((P54306) Ciri-ciri hujan dan bencana banjir di lembangan Sg Pahang) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2011
- Shalini A/P Sanmargaraja (Tajuk : Penyediaan Fasiliti Rumah Orang Tua : Kajian Kes Di Bandaraya Ipoh Dan Johor Bharu (Universiti Tun Hussein Onn Malaysia) (External Examiner, National) 2012
- Rashidah Binti Ahmad (Tajuk: Penggunaan dan Penjimatan Tenaga Elektrik bagi Pengguna Domestik: Kajian Kes Taman Seri Empayar Presint 5, Putrajaya) (Universiti Sains Malaysia) (Internal Examiner, University) 2012
- Tam Tze Huey (Tajuk: Flood Risk Mapping Using Geospatial Technologies and Hydrodynamic Modeling) (Universiti Teknologi Malaysia) (External Examiner, National) 2013
- Wan Nur' Ashiqin Wan Mohamad (Tajuk: "Profil Pendidik Amalan Penjimatan Air di Institusi Pengajian Tinggi") (Universiti Kebangsaan Malaysia) (External Examiner, National) 2013
- Rafiqah Binti Mat (Pengekalan dan halangan pertanian bandar di bandar Kulim, Kedah) (Universiti Sains Malaysia) (Internal Examiner, University) 2014
- Solihah Bt Hj Mustafa (Penglibatan komuniti dalam pemuliharaan george town sebagai tapak warisan dunia UNESCO) (Universiti Sains Malaysia) (Internal Examiner, University) 2014
- Nurhamizah Binti Shaharudin (M20122002061) bertajuk Pengaruh Guna Tanah Terhadap Kualiti Air Tasik Rekreasi di Taman Tasik Taiping, Perak) (Universiti Pendidikan Sultan Idris) (External Examiner, National) 2014
- Nor Robiatul Adawiyah Binti Shamsuri (Penglibatan Komuniti dalam Pengurusan Risiko Bencana di Bandar Bukit Mertajam, Pulau Pinang) (Universiti Sains Malaysia) (Internal Examiner, University) 2015
- Nurul Fadzliana Binti Abu Hassan (Manfaat perkhidmatan ekosistem budaya a dari Taman Jubli Perak, Sungai Petani, Kedah) (Universiti Sains Malaysia) (Internal Examiner, University) 2015
- Izza Shafini Binti Zainal Abidin (Pengetahuan Komuniti Dalam Pengurangan Risiko Banjir Di Alor Setar, Kedah) (Universiti Sains Malaysia) (Internal Examiner, University) 2016
- Mohammad Ariffudin Bin Sah Harudin (Pengurusan pencemaran air larian banjir di kawasan tadahan Sungai Pinang, Pulau Pinang) (Universiti Sains Malaysia) (Internal Examiner, University) 2016
- Nor Atika Binti Abdullah Shahimi (gangguan persekitaran fizikal di laluan pejalan kaki terhadap aktiviti pelancongan di bandar warisan George Town, Pulau Pinang) (Universiti Sains Malaysia) (Internal Examiner, University) 2017
- Nor Robiatul Adawiyah Binti Shamsuri (Title: Penglibatan komuniti dalam pengurusan risiko bencana di bandar Bukit Mertajam, Pulau Pinang) (Universiti Sains Malaysia) (Internal Examiner, University) 2015
- Izza Shafini Binti Zainal Abidin (Title: Pengetahuan Komuniti dalam Pengurangan Risiko Banjir di Alor Setar, Kedah) (Universiti Sains Malaysia) (Internal Examiner, University) 2015
- Satesh a/l Balachanthar (Development of a nutritionally-balanced, cost-effective, socially-acceptable and sustainable emergency food aid design for disaster relief and preparedness) (Universiti Sains Malaysia) (Internal Examiner, University) 2019
- Linges Navamney (Public Perception on water pricing of local communities in George Town, Penang) (Universiti Sains Malaysia) (Internal Examiner, University) 2019
- Mohamad Muhyiddin Bin Hassan ((P88779) bertajuk Penyelarasan Program Badan Bukan Kerajaan (NGO) Ke Arah Mencapai Matlamat Pembangunan Lestari (SDGs): Kajian Kes Global Environment Center (GEC)) (Universiti Kebangsaan Malaysia) (External Examiner, National) 2019
- Jacquoelyn a/k Paska (Evaluation of satellite precipitation products in extreme rainfall events over Peninsular Malaysia) (Universiti Teknologi Malaysia) (External Examiner, National) 2019
- Mohammad Nasir, Muhammad Azamuddeen (ID: 18817536) (Applicability of Low-Cost Cameras for Monitoring Suspended Sediment Through Close-Range Remote Sensing) (University of Nottingham Malaysia) (External Examiner, National) 2021
- Zibeon Bin Luhaim (P-HM0005/20(R) (Analisis Ruang-Masa Kemarau Hidro-meteorologi di Lembangan Sungai Muda, Malaysia) (Universiti Sains Malaysia) (Internal Examiner, University) 2021
- Kee Siau Fen (Community awareness and adaptation behaviour to floods in the East Coast of Peninsular Malaysia) (Universiti Sains Malaysia) (Internal Examiner, University) 2021
- Zhang Yining (Impact of High-Speed Rails in Xiamen City to Land Use: Land Use Trends and Citizen Perspective) (Universiti Sains



### Contribution to external organisation

(2016) Member of Panel, FRGS Grant Evaluation Panel, Ministry of Education Malaysia (2014-2016) (Expert Evaluator)

(2015) Expert Slope Stability Advisor to Penang State Government in the Technical Advisory Committee on Slope Development, Slope Stability & Slope Management Strategies, Penang State Government, December 2013-December 2015 (Expert Slope Stability Advisor)

(2014) Externer Assessor, Panel for Promotion of Academic Staff to Professor & Associate Professor, University of Malaya, Faculty of Arts 50603 Kuala Lumpur (18 April 2011-30 April 2014) (Expert Assessor)

(2010) Panel Member & Advisor, Review of Geography & Environment Elements for Curriculum of Year 2 Level, Curriculum Development Centre, Ministry of Education Malaysia, Level 4-8, Block E9, Government Complex Parcel E, Federal Government Administrative Centre, 62604 PUTRAJAYA (17 Feb 2010) (Expert Panel Advisor)

(2007) Expert Advisor, Penang State Committee on Malaysia Environmental Week (Penang State Level), May-August 2007, Penang State, Organised by Department of Environment Malaysia and Penang State Government (Department of Tourism Development & Environment) (May-August 2007) (Expert Advisor)

(2005) External Academic Assessor, Environmental Management Programme of Centre for Postgraduate Studies, Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor (April 2005) (External Academic Assessor)

(2005) Expert Team Leader, Examination of Higher School Certificate Malaysia (STPM) Geography Paper 942/1 Geography of the Physical Environmental 2005, Malaysian Examination Council, Bangunan MPM, Persiaran 1, Bandar Baru Selayang, 68100 Batu Caves, Selangor (2005) (Expert Team Leader)

(2005) Expert Panel Advisor, Panel for the Assessment of Higher School Certificate Malaysia (STPM), Geography Paper 942/1 Physical Environmental Geography 2005, Malaysian Examination Council, Bangunan MPM, Persiaran 1, Bandar Baru Selayang, 68100 Batu Caves, Selangor (January 2005) (Expert Panel Advisor)

(2005) Expert Environmental Management Advisor to Penang State Environmental Council, Secretariat at Unit Perancang Ekonomi Negeri (UPEN), Penang State, Level 26, KOMTAR, 10503 Penang (January 2009 – Present) (Expert Environmental Management Advisor)

(2004) Expert Geography Syllabus Advisor, Committee for the Re-Evaluation of Higher School Certificate Malaysia (STPM) Geography Syllabus Malaysian Examination Council, Bangunan MPM, Persiaran 1, Bandar Baru Selayang, 68100 Batu Caves, Selangor (Nov 2004 – Present) (Expert Geography Syllabus Advisor)

(1999) Member of Panel of Judges for MWA Awards 2024, Malaysian Water Association (MWA), C/O Office of Director of Water Supplies, Jabatan Kerja Raya Malaysia, Jalan Sultan Salahuddin, 50582 Kuala Lumpur (Judge)

(1997) Soil Erosion, Water Resources and Flood Expert Advisor in the Penang State Chief Minister's Panel of EIA Evaluation Committee. This committee reviews, evaluates and assesses the credibility of EIA reports submitted for environmentally sensitive development projects (1996 - 1997) (Soil Erosion, Water Resources and Flood Expert Advisor)

(1991) Expert Geography Terminology Advisor for the Dewan Bahasa dan Pustaka Malaysia on the formalising of Bahasa Malaysia Terminology for Universities. Dewan Bahasa dan Pustaka Malaysia, Kuala Lumpur. The length of the consultancy was from 1st January 1987 to 31st August 1991 (Expert Geography Terminology Advisor)

## Media appearance

(2024) BFM Podcast on Top 5 At 5: Higher Water Bills, Better Water Resilience. 3. Public outrage to Penang's water tariff hike. Professor Dato' Dr Chan Ngai Weng, Honorary Professor of Environmental Management at USM shares his thoughts with us (<https://www.bfm.my/podcast/evening-edition/evening-edition/top-5-at-5-higher-water-bills-better-water-resilience>) (Producer Alia Zefri, Sudais Ferhard)

(2024) TV Recording of the work of Chan Ngai Weng & Water Watch Penang by Astro AEC HD | The Guardians / The Guardians 7 [638295228129722157], Guardians WWP-CNW Video Part 1 ([https://www.youtube.com/watch?v=1uTW\\_PVJXzE](https://www.youtube.com/watch?v=1uTW_PVJXzE)) (Producer The Guardians)

(2023) Being A Conscious Water Consumer: What Penang Can Teach Us. Interview with Professor Dr Chan Ngai Weng, President, Water Watch Penang ([Evening Edition](https://www.bfm.my/podcast/evening-edition/inside-story/being-a-conscious-water-consumer-what-penang-can-teach-us) · [Inside Story](https://www.bfm.my/podcast/evening-edition/inside-story/being-a-conscious-water-consumer-what-penang-can-teach-us) · 24 May 2023 · 06:00 pm · 57 mins listen) <https://www.bfm.my/podcast/evening-edition/inside-story/being-a-conscious-water-consumer-what-penang-can-teach-us> (Producer - Sharad Kuttan)

(2022) DISTED College Earth Day 2022 Panel Discussion - Invest in Our Planet. Earth Day 2022 Panel Discussion - Invest in Our Planet DISTED College, Penang, MALAYSIA CHAIR: Prof. Dr. Vikneswaran Nair President, DISTED College, Penang, Adjunct Professor, Wawasan Open University PANELIST Dr. Marzieh Fallah, Ecotourism Consultant, Eco-Coach & Tours, Penang Prof. Dr. Chan Ngai Weng, President, Water Watch Penang, Professor, Universiti Sains Malaysia Ms. Ashawani Chinathamby, Senior Officer, Environmental Education & Outreach (EEO), Penang Green Council (<https://www.youtube.com/watch?v=sCabgdTotXI>)

(2021) Politics | Kedah - Penang: Weaponising water conflict? 655 views Streamed live on Apr 12, 2021. Tonight on [#ConsiderThis](https://www.youtube.com/watch?v=F7XA3qS5o0I) Melisa Idris & Sharaad Kuttan speak to Prof Dr Chan Ngai Weng, water quality expert Dr Maketab Mohamed & AWER's S. Piarpakaran on how to break the impasse (<https://www.youtube.com/watch?v=F7XA3qS5o0I>)

(2020) Master Class on River As A Resource and Management. Online/Media Course by Prof. Dr. Ngai Weng Chan | RiverFlix. Master Class on River As A Resource and Management | Honourable Resource Person : Dr. Chan Ngai Weng , Professor, University Sains Malaysia | President, Penang Water Watch Organized By: Bangladesh River Foundation and Halda River Research Laboratory Course Advisor: Dr. Md. Manzoorul Kibria Professor, Zoology Department, University of Chittagong & Co-ordinator, Halda River Research Laboratory. Course Planner : Md. Monir Hossain (<https://www.youtube.com/watch?v=LxQnirOXi1Q>)

(2019) BFM Podcast on Earth Day 2019 Special: Make the Greater Ulu Muda Forest Complex a State Park. Interview with Professor Dr Chan Ngai Weng, President, Water Watch Penang ([the-bigger-picture](https://www.bfm.my/podcast/the-bigger-picture/earth-matters/em-make-the-greater-ulu-muda-forest-complex-state-park) · [earth-matters](https://www.bfm.my/podcast/the-bigger-picture/earth-matters/em-make-the-greater-ulu-muda-forest-complex-state-park) · 22 Apr 2019 · 03:00 pm · 27 mins listen) (<https://www.bfm.my/podcast/the-bigger-picture/earth-matters/em-make-the-greater-ulu-muda-forest-complex-state-park>) (Producer Juliet Jacobs)

(2002) TV Recording for TV3 under the programme "Malaysia Kini" – By invitation from TV3, 10 January 2002. Discussion topic "Flood management in Malaysia: Major Issues and Solutions". Organised by TV3. This programme is aired on TV3 live on 10 January 2002, from 8.00-9.00 am, National (Interview Broadcast)

(2001) Invited TV Recording for Cable Channel 18 WYPL, 14 June 2001. Topic of Discussion "Water Conservation: Major Issues and How the Public Can Help." Organized by Sierra Club, Tennessee Chapter. This Programme is aired over Cable Channel 18 under the programme "The Nature of Conservation" on Mondays and Fridays (International TV Broadcast Interview)

## SUPERVISION

### PhD

(2024) Stakeholders' Participation in Ecotourism Management: A Case Study of the Ulu Muda Forest Reserve, Ong Ke Shin (Universiti Sains Malaysia) (Main Supervisor from 2019-2022. Subsequently relegated to Co-Supervisor due to Retirement in 2022).

(2022) Assessing sustainability index of water resources system for Lombok River Basin, Anggara Wiyono Wit Saputra (Universiti Sains Malaysia) (Co-Supervisor)

(2021) Climate change impacts on surface water management in the northern province of Sri Lanka, Piratheeparajah Nagamuthu (Universiti Sains Malaysia) (Main Supervisor from 2019-2021. Subsequently relegated to Co-Supervisor due to Retirement in 2022)

(2021) Stakeholders Participation Towards Sustainable River Basin Management: A Case Study of Muda River Basin, Sim Lay Mei (Universiti Sains Malaysia) (Main Supervisor from 2019-2021. Subsequently relegated to Co-Supervisor due to Retirement in 2022)

(2021) Stable Channel Analysis with Sediment Transport for Rivers In Malaysia: A Case Study of the Muda, Langat and Kurau Rivers, Mohd Afiq Bin Harun (Universiti Sains Malaysia) (Co-Supervisor)

(2020) Vulnerability and Resilience of Local Communities in Coping with Flood Hazards in Kelantan, Nur Syuhada Binti Anua (Universiti Sains Malaysia) (Main Supervisor)

- (2019) Efficiency in Reduction of Non-Revenue Water (NRW) to Increase Water Security in Kelantan, Mohammad Ghazi Bin Hj Ismail (Universiti Sains Malaysia) (Main Supervisor)
- (2019) Water security and Poverty Alleviation: Case of Urban Agriculture in Malaysia, Pushpawani A/P Ramaloo (Universiti Kebangsaan Malaysia) (Co-Supervisor)
- (2018) Ecotourism Potentials of Penang Towards a Sustainable Tourism Destination: A Case Study of Penang Hill, Mohd Firdaus (Universiti Sains Malaysia) (Main Supervisor)
- (2016) Ketidakelesaian Terma akibat Pulau Haba Bandar terhadap Masyarakat di Pulau Pinang, Nur Aili Hanim Binti Hanafiah (Universiti Sains Malaysia) (Main Supervisor)
- (2016) Carbon and Energy Footprint of Shrimp Aquaculture in Indonesia: The Opportunities and Limitations of International Responsible Aquaculture Standards, Riza Damanik (Universiti Sains Malaysia) (Main Supervisor)
- (2016) Ecotourism and Environmental Conservation in Belum Temengor Forest Complex: A Multi-Stakeholder Perspective, Azreen Rozainee Abdullah (Universiti Sains Malaysia) (Main Supervisor)
- (2015) The Significance of Natural and Human Factors in Rice Farming Sustainability in Bangladesh, Ranjan Roy (Universiti Sains Malaysia) (Main Supervisor)
- (2014) Sustainable Tourism: A Study on Management and Sustainability Aspects of Salt Lick Ecotourism of Selected Salt Licks in Malaysia, Ang Sek Chuan (Universiti Sains Malaysia) (Main Supervisor)
- (2013) Assessment on Environmental Sustainability Aspects of Penang National Park Management, Hong Chern Wern (Universiti Sains Malaysia) (Main Supervisor)
- (2012) Pelancongan Bandar : Satu Kajian Persepsi Pelancong dan Penduduk di Georgetown, Pulau Pinang, Tan Cheng Hai (Universiti Sains Malaysia) (Co-Supervisor)
- (2012) Operational Efficiency and Environmental Effectiveness of the Malaysian Water Supply Sector, Ching Too al Kim (Wageningen University, Netherlands) (Field Supervisor)
- (2003) Pencemaran udara dan tahap keasidan jasad air kajian kes di negeri Pulau Pinang, Main bin Rindam (PhD (Universiti Sains Malaysia) (Co-Supervisor)
- (1999) Politics and Power: Government Intervention in the Muda Irrigation Scheme, Malaysia, Clare Louise Gorton (Middlesex University) (Field Supervisor)

### Master

- (2023) A Study on Urban Tourism Brand Image of Gongyi City Based on Tourist Perception, Wang Xue (Universiti Sains Malaysia) (Main Supervisor)
- (2022) Addressing obstructive factors affecting ecotourism and sustainable development in Beibei District, Chongqing, Lyu Liqin (Universiti Sains Malaysia) (Main Supervisor)
- (2018) Human Aspects of Water Security With Special Focus on Consumers' Behaviour, Phang Wai Leng (Universiti Sains Malaysia) (Main Supervisor)
- (2017) Pertanian bandar di George Town: ke arah kehidupan komuniti yang lestari, Siti Sarah Binti Jamil (Universiti Sains Malaysia) (Main Supervisor)
- (2017) Using Rainwater harvesting System Towards Enhancing Water Sustainability in Yokohama, Geraldine Kong Sing Liin (Universiti Sains Malaysia) (Main Supervisor)
- (2016) Issues and Challenges in Reducing Non Revenue Water (NRW) Rates: A Comparative Study of Penang State and Sabah State in Malaysia, Lai Chee Hui (Universiti Sains Malaysia) (Main Supervisor)
- (2016) Adaptasi Komuniti Bandar Terhadap Pencemaran Udara: Kajian kes di George Town, Pulau Pinang, Siti Nur Aziah Binti Napi (Universiti Sains Malaysia) (Main Supervisor)
- (2016) Persepsi Komuniti Bandar Terhadap Sistem Penuaian Hujan: Kajian Kes di George Town, Pulau Pinang, Priscilla Law Siew Ing (Universiti Sains Malaysia) (Main Supervisor)
- (2016) Keterancaman, Adaptasi dan Daya Tahan Komuniti Bandar Terhadap Banjir di Kota Bharu, Kelantan, Nurul Hazwani Binti Siha (Universiti Sains Malaysia) (Main Supervisor)
- (2016) Peranan Komuniti Setempat dan Pihak Pertubuhan Bukan kerajaan dalam Menangani Isu Pencemaran Sungai Pinang di George Town, Pulau Pinang, Nur Syuhada Binti Mustakim (Universiti Sains Malaysia) (Main Supervisor)
- (2016) Adaptasi Komuniti Bandar Terhadap Fenomena Pulau Haba Bandar di George Town, Pulau Pinang, Nur Afiah Binti Abdul Rahim (Universiti Sains Malaysia) (Main Supervisor)
- (2016) Kajian Pencemaran Mikrobiologi Dalam Air Minuman Dari Mesin Vendor Osmosis Berbalik Di Kawasan Sungai Dua, Daerah Timur Laut, Pulau Pinang, Azian Rizal Bin Ahmad (Universiti Sains Malaysia) (Main Supervisor)
- (2014) Policy Evaluation of Plastic Bag Ban: A Case Study in Penang, Malaysia, Ong Ke Shin (Universiti Sains Malaysia) (Main Supervisor)
- (2014) Kesedaran, kepuasan dan keyakinan masyarakat terhadap kualiti air paip domestik: kajian kes di bandar Georgetown, Pulau Pinang, Norshuhada Binti Anua (Universiti Sains Malaysia) (Main Supervisor)
- (2008) Pembangunan Ekopelancongan di Cameron Highlands: Satu Kajian Kes, Lee Boon Hiong (Universiti Sains Malaysia) (Main Supervisor)
- (2006) Fenomena pulau haba dan pembedaran: satu kajian kes di Pulau Pinang, Sin Hui Teng (Universiti Sains Malaysia) (Main Supervisor)
- (2005) Pembangunan pelancongan mampan : satu kajian persepsi pengunjung di Bukit Bendera, Pulau Pinang, Yong Thian Ming (Universiti Sains Malaysia) (Main Supervisor)
- (2003) Satu Kajian Variasi Ruangan Hujan Asid di Semenanjung Malaysia, Lee Ooi Peng (Universiti Sains Malaysia) (Main Supervisor)
- (1999) Urbanization and flash floods in Nibong Tebal Town Area, Seberang Prai Selatan, Pulau Pinang, Edlic Sathiamurthy (University of Malaya) (Co-Supervisor)

## TEACHING

### Master

1. HGT523 - SAINS MAKLUMAT GEOGRAFI DALAM PENGURUSAN SUMBER DAN BENCANA
2. EAD 514 - River Ecosystem (Offered by River Engineering and Urban Drainage Research Centre (REDAC) USM)
3. M.Sc. Sustainable Cities and Communities (Taught and Supervised Students in Thesis Component)
4. ED79.07 Disaster Management in Urban Environmental Planning 3(3-0) Semester: August, Asian Institute of Technology, School of Environment, Resources and Development (Taught in 2007/2008)

### Bachelor

1. HGA101/4 – Pengantar Geografi
2. HGF222/3 - Geografi Fizikal
3. HGG 454 - Topik-Topik Terpilih Dalam Geografi
4. HGM 430/3 – Pemikiran Geografi
5. HGT 222/4 - Teknik-Teknik Dalam Geografi
6. HGF227 - Iklim dan Cuaca
7. HGW372E – Geography of ASEAN and Asia Pacific
8. HGT 342/4 - Kaedah Penyelidikan dan Kajian Luar Geografi
9. HGF 225/3 - Proses-proses Alam Sekitar
10. HGF 226/3 Iklim, Cuaca dan Biogeografi
11. HGF 332/3 Alam Sekitar Mapan
12. HGP309 Projek Geografi
13. Geog 1001 - Introduction to Geography (Department of Geography, University of Memphis TN USA, Session 2000/2001)

## SOCIAL RESPONSIBILITY ACTIVITIES

### SERVICE TO SOCIETY WITH DATES

Emeritus Professor Dato' Dr Chan Ngai Weng is trained as a geographer, a field that focuses on human-environment relationships. He has more than 40 years experience in social work, especially in the area of water advocacy, water activism, water research and publication related to society, and also as an environmental activist. His contribution to society in terms of social responsibilities include volunteering in the following Non-Profit Organisations: Water Watch Penang (President since 1997), Member of International Water Resources Association (IWRA) (1997-2020), Vice-President of the International Water Resources Association (IWRA) (2013-2015), member of International Association of Hydrological Sciences, member of International Water Association and member of Malaysian Water Association. He is active in civil society work in the area of water resources and environmental management. Other social work includes being member of Malaysian Environmental NGOs (MENGOs) and Malaysian Water Partnership (MyWP). In the civil society arena, he is fondly referred to as "Malaysia's Waterman"!

Panel Member for Evaluation of MRUN Universiti Teknologi Malaysia Titled "MRUN 1.0: River Basin Approach For Integrated Risk Management And Reduction of Water-Related Hazards", May 2021, Online Assessment.

Panel Member of Penang Technical Advisory Committee (For Penang State) – For Slope Stability, Appointed by Penang State Government, Secretariat in Majlis Bandaraya Pulau Pinang, Negeri Pulau Pinang, Paras 13, KOMTAR 10503 Pulau Pinang (January 2013 – Present)

Organising Chairman, Organising and Running of Penang State Inter-School Water Quiz 2013 involving 31 Schools (150 students and 31 teachers) and 10 USM Facilitators, School of Humanities USM (14 November 2013)

Penang State Environmental Council, Secretariat at Unit Perancang Ekonomi Negeri (UPEN), Penang State, Level 26, KOMTAR, 10503 Penang (January 2009 – Present)

Secretary, International Conference "World Citizens Assembly on Water (WCAW), Inaugural Meeting, Kuala Lumpur, 27-29 October 2005. Organised the above conference on behalf of The Alliance for a Responsible, Plural and United World, The Charles Leopold Mayer Foundation and Water Watch Penang.

Committee Member, Penang State Pinang River and Batu River Management Committee, Secretariat at Department of Drainage and Irrigation (Penang State), 29th Floor, KOMTAR, 10000 Jalan Penang, Pulau Pinang (May 2005 – Present)

Secretary, N-Park Resident Association, 3A-32-03 N-Park, Jalan Batu Uban, 11700 Pulau Pinang, (2001-2007)

Committee Member (Appointed by the Chief Minister of Penang), Penang State Environmental Council, Secretariat at Department of Environment (Penang State), 5th Floor, Wisma Peladang, Jalan Kg Gajah, 12200 Butterworth (September 1996 – 2000)

Committee Member (Appointed by the State Secretary of Penang State), Local Government Consultative Council of Penang State, Level 25, KOMTAR 10503 Penang (July 2001 – Present)

Committee Member, National Committee on Celebrating World Water Day 2000, Secretariat at The Drainage and Irrigation Department Malaysia, Km 7, Jalan Ampang, 68000 Ampang, Kuala Lumpur (January – March 2000)

Committee Member, Committee on Monitoring and Assessment of Drought Conditions in Pulau Pinang, The Drainage and Irrigation Department Malaysia, Km 7, Jalan Ampang, 68000 Ampang, Kuala Lumpur (1997-1998)

Committee Member, National Committee for Scientific Research on Climate Impacts, Secretariat at Malaysian Meteorological Service, MMS Headquarters, Jalan Sultan, 46100 Petaling Jaya (Since 8 March 1997 - Present)

President, Water Watch Penang (WWP), 10 Persiaran Bt Jambul, 11900 Bayan Lepas, Penang (November 1997 - Present)

Chairman, Malaysian Nature Society, Penang Branch, P.O. Box 61, Jalan Gelugor, 11700 Penang (28 July 1998 – July 2000)

Council Member, Malaysian Nature Society National Council, 641 Jalan Kelantan, Bukit Persekutuan, 50480 Kuala Lumpur (28 July 1998 – July 2000)

Organising Chairman, Water Mobilising Programme "Meeting Water Challenges in the 21st Century", Alliance for a Responsible and United World, Fondation pour le progres del'homme (Paris), The Ferringhi Beach Hotel, Penang (January 19-23, 1997)

Committee Member, Friends of Penang Hill, Secretariat at Consumers' Association of Penang, 228 Jalan MaCalister, Penang (January 1997 - Present)

Committee Member, Malaysian Nature Society, Penang Branch, P.O. Box 10750, 50724 Kuala Lumpur MALAYSIA (29 July 1995 - 28 July 1997)

Committee Member, Publications Sub-committee, Women Crisis Centre, 24-D Jones Road, 10250 Penang (1995 - 1996)

Manager, Penang State Squash Team, For the Interstate Squash Competition held in Kuala Lumpur, (Penang won the Tunku Imran Trophy for this competition for the year 1990) (1990)

Committee Member, Squash Racket Association of Penang, Based at Pepsi Squash Centre, Bukit Dumbar, Penang (November 1990 - August 1991)

Manager, Penang State Junior Squash Team, For the Junior Inter-state Squash Competition held in Kuala Lumpur (For the years 1989 and 1990)

Committee Member, ASEAN Workshop For School Children (to promote a better understanding of the Geography of ASEAN and to promote Tourism in Penang), Organised by the Penang Development Corporation, Penang (June 1988)

Committee Member, National Geography Association of Malaysia, Based at the Department of Geography, University of Malaya, 59100 Kuala Lumpur (1981 - 1989)

