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Ph.D (Remote Sensing, LiDAR, Geosciences, Geomorphology, Landslides)
Faculty of Geosciences, Utrecht University, Utrecht
with cooperation of ITC-University of Twente, United Nation University
(UNU)-Disaster Risk Management (DRM) Center for Spatial and Risk
Management, The Netherlands

Research Laboratory

Multi-Geohazard and Disaster Risk Lab, Disaster Preparedness and Prevention Center,
Malaysia-Japan International Institute of Technology @ <http://mjiit.utm.my/dppc/>
Universiti Teknologi Malaysia (UTM) Kuala Lumpur

Career/Experience:

Assistant Head of Survey Mapping, Department of Surveying and Mapping,
National Land and Survey Institute, Ministry of Natural Resources and Environment, 2004-2006
Lecturer @ College Science and Technology UTM, 2006-2008
PhD Researcher @ University of Twente and Utrecht University, the Netherlands
Senior Lecturer @ UTM Kuala Lumpur 2006 till present;

Visiting Research Scholars in 2017

@ Disaster Prevention Research Institute, Kyoto University, Japan

@ International Research Institute of Disaster Science, Tohoku University

@ Asian Disaster Reduction Center (ADRC) Kobe, Japan

Co-Chair Working Group on Climate Change and Disaster Risk Reduction, Global Young Academy
Technical Committee, Asian Civil Engineering Coordinating Council (ACECC)
TC21: Transdisciplinary Approach for Building Societal Resilience to Disasters
International Science Council, Integrated Research Disaster Risk (IRDR) Young Scientists Programme
Science and Technology Expert Panel for Disaster Risk Reduction, NADMA Prime Minister's Department
Member of the Academy Sciences of Malaysia, Disaster Risk Reduction Alliance

Expertise & Interest

Geohazards, Disaster Risk Reduction, Multi-Hazard Risk Assessment, DRR and Resilience Strategy,
Sediment-related and Climate-induced Disaster Risk Management, Geospatial Smart Solution,
Advanced GIS, Multi-Sensory Remotely Sensed Data Analytics, Community-led Disaster Risk Reduction;
Disaster Informatics; Disaster Resilient Society; Risk-informed Sustainable Development;

Selected Consultation Projects:

1. Consultant, Development Management Plan for Coastal Zones in Langkawi, Kedah, Federal Department of Town and Country Planning Peninsular Malaysia, Ministry of Urban Wellbeing, Housing and Local Government, 2020-2022.
2. Consultant, High Impact Community-based Disaster Risk Reduction 2018, Department of Mineral and Geoscience, Ministry of Water, Land, and Natural Resources 2018
3. Consultant, Disaster Resilient Cities, Federal Department of Town and Country Planning Peninsular Malaysia, Ministry of Urban Wellbeing, Housing and Local Government, 2017-2018
4. Consultant, Review of the National Slope Master Plan 2009-2023, ServisEDA for Public Work Department Malaysia, Ministry of Public Work Malaysia, 2016-2017
5. Consultant, Contract Research, Landslide Hazard and Risk Mapping in Sabah, Geo Strata Sdn Bhd for Minerals and Geoscience Department, Ministry of Natural Resources and Environment Malaysia, February 2016- March 2017
6. Lead Consultant, Physical Scientific Assessment and Slope Stability Assessment using LiDAR for Gombak Selangor Quartz Ridge, 2015, the Selangor Town and Country Planning Department, for the State of Selangor
7. Lead Consultant, Scientific Assessment Study of Physical Characteristics and Slope Stability Assessment based on LiDAR Data in Gombak Selangor Quartz Ridge, 2014, the Selangor Town and Country Planning Department, for the State of Selangor
8. Consultant, Geotechnical and Geological Risk Assessment, Batu Caves Selangor, 2014-2015, the Selangor Town and Country Planning Department, for the State of Selangor
9. Consultant, Terrestrial laser Scanning for Tunnels and Power House Cavern at Power Station Sultan Ismail Petra, Jeli Kelantan, 2015-2016, TNB Research Sdn Bhd,
10. Consultant, Geological Mapping and Stability Assessment of the Rock Slopes, Hulu Langat, Selangor, September 2015
11. Program Director, International Symposium on Multi-Hazard and Risk, March 2015

Selected Publications:

Exploring Transdisciplinary Approaches to Facilitate Disaster Risk Reduction at National and Local Levels Through Education, Training and Field Practice, 2019, United Nations International Strategy for Disaster Reduction (UNISDR) Global Assessment Report 2019 United Nations Office for Disaster Risk Reduction - **International Policy Paper/document**

Disaster Risk Report: Landslide and Flood Risk in the State of Selangor, 2019. Strengthening the Disaster Risk Reduction Capacity to Improve the Safety and Security of Communities by Understanding Disaster Risk (SeDAR), Japan Partnership Program – **State Policy Document**

National Guideline Development Planning for Disaster Resilient City, 2018. Federal Department for Town and Country Planning (PLANMalaysia) - **National Policy Paper/document**

Review of the National Slope Master Plan 2009-2023, 2017. Slope Engineering Branch, Public Work Department, Ministry of Works Malaysia - **National Policy Paper/document**

Kamarudin, K.H., **Razak, K.A.**, 2018. Comprehensive Study on Community Based Disaster Risk Reduction (CBDRR): The Case of Taman Idaman, Serendah, Hulu Selangor, Selangor, 25 May 2017, 41 p

Razak, K.A., (2017). Geohazard Risk Assessment in a Tectonically Action Region in Malaysia. In: UNESCO-JASTIP Joint Symposium on Intra-Regional Water Security and Disaster Management, the 3rd Symposium on JASTIP Disaster Prevention International Cooperation Research, Manila, 16 Nov 2017.

Razak, K.A., Knowledge-based Action for Disaster Risk Reduction in Malaysia: A Transdisciplinary Approach, International Workshop Towards Building Regional Platform for Disaster Risk Reduction in Asia, 02-03 May 2017, Institute of Islamic Understanding Malaysia, Kuala Lumpur

Razak, K.A., Mohamad Z., Abd Razak, R., Ramli, Z., Abu Bakar, R., (2016). *Advanced geospatial data for cascading geo-hazard and disaster risk assessment: A case study of 2015 earthquakes in Sabah*. In: FIG

working week 2016: Recovery from disaster, Christchurch, New Zealand, 02-06 Nov 2016.

Yusoff, H.H.M., Razak, K.A., Yuen, F., Harun, A., Talib, J., Mohamad. Z., Ramli, Z., Razab, R.A., (2016). *Mapping of Post-Event Earthquake Induced Landslides in Sg. Mersilau, using LiDAR*. In: 8th IGRSM International Conference and Exhibition on Geospatial and Remote Sensing, KL 13-14 April 2016.

Razak, K.A., Abd Latiff, Z., Che Hasan, R., Kamaruddin, K.H., Abu Bakar, R., (Eds) (2015). *Slope Hazard and Risk, JMG-PBRC Publication Series 1*, UTM Razak School of Engineering and Advanced Technology, UTM Kuala Lumpur, ISBN 978-967-11814-7-8, 56 p.

Razak, K. A., Mohamad, Z (2015). *Methodological Framework for Landslide Hazard and Risk Mapping using Advanced Geospatial Technologies*. Malaysia Journal of Remote Sensing & GIS vol. 4(2), Special Issue ISMHR2015, ISSN 1511-7049, Kuala Lumpur, 49-66.

Razak, K.A. (2014). *Airborne laser scanning for forested landslides investigation in temperate and tropical environments*. University of Utrecht, the Netherlands. ISBN 978-90-365-3625-7.**

Razak, K.A., Bucksch, A., Damen, M., van Westen, C.J., Straatsma, M.W., de Jong, S.M. (2013). *Characterizing tree growth anomaly induced by landslides using LIDAR*. In: *Landslide Science and Practice: Landslide Inventory, Susceptibility and Hazard Zoning*, (Eds.) Margottini, C., Canuti, P., Sassa, K. Springer Verlag Berlin Heidelberg, Germany, 235-241**

Razak, K.A., Santangelo, M., Van Westen, C.J., **Straatsma, M.W.,** de Jong, S. M. (2013). *Generating an optimal DTM from airborne laser scanning data for landslide mapping in a tropical forest environment*. *Geomorphology* 190, 112-125; doi: 10.1016/j.geomorph.2013.02.021 **

Razak, K.A., Straatsma, M.W., Van Westen, C.J., Malet, J.P., de Jong, S.M., (2011). *Airborne laser scanning of forested landslides characterization: terrain model quality and visualization*. *Geomorphology* 126 (1-2), 186-200; doi: 10.1016/j.geomorph.2010.11.003 **

** These publication lead to the development of tender document project worth of RM 46 million for Minerals and Geoscience Department, Ministry of Natural Resources and Environment Malaysia

Community Project:-

Disaster Risk Reduction Program in Sabah 2015* in Kundasang-Ranau, Sabah
Program Director; partners: UTM, JMG, UTP, UiTM, UMS, and industrial partners

*Received 5 Star Rating for Community Transformation Impact 2016 by CCIN Universiti Teknologi Malaysia and Ministry of Higher Education. It benefited 11,000 communities.

Community Program on Disaster Education and Preparedness for Social Resilience, MJIIT UTM Kuala Lumpur with collaboration of Disaster Management Unit, State Secretary Office of Selangor and Japan International Cooperation Agency, May 2017, Serendah Selangor

UTM Disaster Risk Reduction 2016 in Jajahan Pasir Mas, Kelantan.

Program Director, partners: National Disaster Management Agency (NaDMA), Malaysia Civil Defense Force (APM), Fire & Rescue Department, Ministry of Health, NGOs, and local city council. Listed on the web-based the United Nations Office for Disaster Risk Reduction @ <https://www.unisdr.org/we/inform/events/50547>. It benefited 20,000 people.

High Impact Community-based Disaster Risk Reduction (HiCBDRR) 2018 in Conjunction to UNISDR International Day for Disaster Reduction in Kundasang, Sabah

Program Director, partners from Department of Mineral and Geosciences Malaysia, National Disaster Management Agency, Malaysia Civil Defense Force.

Science and Technology for Disaster Risk Reduction (STDRR) Week 2019, 25 February-02 March 2019, Kundasang, Sabah, Program Director, in collaboration of NADMA Malaysia, JMG Malaysia

Science and Technology for Disaster Risk Reduction (STDRR) Week 2020, 24 February-03 March 2020, Kundasang, Sabah, Program Director, in collaboration of Ministry of Economic Affairs, NADMA Malaysia, JMG Malaysia, Sabah Parks, Asian Civil Engineering Coordinating Council (ACECC)

International Project: 1) Technology Enhanced Stakeholder Collaboration for Supporting Risk-Sensitive Urban Development (TRANSCEND), 2019-2022 with UK, Malaysia, Pakistan, and Sri Lanka: Sponsor: Uk Economic & Social Research Council (ERSC) and Global Challenges Research Fund (GCRF). 2) JICA Partnership Program (JPP), Strengthening the Disaster Risk Reduction Capacity to Improve the Safety and Security of Communities by Understanding Disaster Risk (SeDAR), 2018-2022 with IRiDES, Tohoku University Japan and Selangor Disaster Management Office: Sponsor: Japan International Cooperation Agency (JICA), 3) Project leader, 2017-2018 Community-based Disaster Informatics for Building a Resilient City, 2016 Extra Budgetary Contribution from the Republic of Korea (EBC-K) Project to Facilitate ICT Application in the Asia-Pacific; 2) Project leader, 2017-2018 Mountain Geohazards and Landslide Geomorphology in Malaysia: Developing Topographic Precursors and Spurring Multi-Disciplinary Geo-Disaster Research, Japan-ASEAN Science, Technology and Innovation Platform (JASTIP) Disaster Prevention International Cooperation Research, DPRI Kyoto University Japan, 4) Project Leader, 2017-2018, Earthquake Resilient Communities in ASEAN Region: A Transdisciplinary Approach. Sponsor: International Council for Science (ICSU) Regional Office for Asia and the Pacific (ROAP), Integrated Research on Disaster Risk (IRDR) ICoE Taipei.

Research Grants: 13 grants worth more than RM 1.8 millions for period 2015-2020

Supervisions: 6 PhD students; 12 Masters; 2 Executive Masters

National Involvement: Technical experts on disaster risk reduction and resilience recognized by the Ministry of Economic Affairs for preparing the Malaysia Development Plan (RMK12) 2021-2025; Disaster Resilient Critical Infrastructure by Construction Research Institute of Malaysia (CREAM), Construction Industry Development Board (CIDB), 2018-2019; National Consultant in the Review of National Slope Master Plan 2009-2023 Public Work Department; Technical expert in the National Project (Slope Hazard and Risk Mapping) worth about RM 46 million (2014-2015) appointed by Minerals and Geoscience Department Malaysia, Ministry of Natural Resources and Environment Malaysia; & National Development Guideline for Disaster Resilient Cities by Federal Department of Town and Country Planning Peninsular Malaysia; Technical Committee in the JMG-Slope Hazard and Risk Mapping-National Slope Master Plan 2009-2023.

Invited papers/presentation

Invited Talk, Disaster Risk Reduction and Resilience in Malaysia: Progress and Challenges. International Conference on Risk-Informed Sustainable Development in the Rural Tropics, 01 Oct 2020, Turin Italy.
Plenary Talk, Geo-led Horizon Scanning Programme for Disaster Risk Reduction (DRR): A New Insight into 2030 Global Vision. International Federation of Surveyors (FIG) Working Week 2019, 22-26 April 2019, Hanoi, Vietnam

Invited Talk, Geospatial Information for a Smarter Life and Environmental Resilience, 2019. FIG (International Federation of Surveyors) Young Surveyors Network, Asia and the Pacific (YSAP). 21 April 2019, Hanoi Vietnam.

Merdeka Award Talk 2018, The power of knowledge: How prepared are we for disaster, Petronas Malaysia, 01 September 2018, Galeri Petronas, Suria KLCC. <https://www.eventbrite.com/e/public-talk-the-power-of-knowledge-how-prepared-are-we-for-disaster-tickets-49634915368#>

Intellectual Discourse 2018, Assessing Landslide Disaster Risk: Why it so difficult?, Disaster Preparedness and Prevention Center @ <http://mjiit.utm.my/dppc/2018/05/22/cpt-1243/>

Invited Talk, Integrated Landslide Risk Management in Malaysia: from Policy into Practice, Society for Engineering Geology and Rock Mechanics Malaysia (SEGRM) Seminar, 20 April 2018, UTM KL

Invited Talk, Disaster Management – An experience sharing from Japan, Taiwan and Korea. Seminar on Disaster Management Kemaman District, 25 Oct 2017, Kemaman Terengganu.

Invited Lecture, Multi-Geohazards and Disaster Risks Assessment: A Technological Perspective, National Geoscience Conference 2017, 09-10 October 2017, at Hotel Istana, Kuala Lumpur @ <http://ngc2017.com/programme/special-lectures/>

Invited talk, Assessing Disaster Risk in Changing Climate: Why it is so difficult? International Conference on Geomatic & Geospatial Technology (GGT) 2017, 04-05 October 2017 Kuala Lumpur @ <http://www.geoinfo.utm.my/ggt2017/>

Invited Talk, Development of Disaster Risk Management (DRM)'s Education and Research Program in Malaysia, Tsukuba Global Science Week (TGSW) 2017, 25-27 September 2017, Tsukuba Japan @ <http://www.kokuren.tsukuba.ac.jp/TGSW2017/>

Special Talk, Knowledge-based Action for Disaster Risk Reduction in Malaysia, 1st Asian International Symposium on Metropolitan Disaster Management, 20-21 September 2017 National University of Kaohsiung, Taiwan @ <http://2017icdprkcg.weebly.com>

Special talk, Topographic Laser Scanning Technology for Geohazard Assessment, ASEAN@50: Partnering for Change, Engaging the World for STI, 13 July 2017 at the World Trade Center, Pasay City, Philippines @ <https://www.asean2017.ph>

Invited Talk, An Integrated Multi-Hazard Risk Assessment: Outlining an Emerging Field of Research and Practice in Malaysia, 4th International Conference on Slopes Malaysia 2015, Slope Engineering Branch Public Work Department Malaysia, 14-16 September 2015, KL

Invited Talk, Risk Mapping and Analysis of Highlands Development using Multi Sensor LiDAR Technology, Seminar on Guideline for Development Planning in the Highland and Hillside, Environment Sensitive Area Selangor, Selangor Town and County Planning Department, Selangor, 12 May 2015 Shah Alam.

Membership: European Geosciences Union; Asia Oceania Geoscience; IEEE Geoscience and Remote Sensing Society; Asian Network on Climate Science and Technology; Asia-Pacific Network on Climate Science & Technology; Asia-Pacific Network for Global Change Research; Multimodal Sediment Disaster Network; Royal Institution of Surveyors Malaysia; Institute of Geospatial and Remote Sensing Malaysia, Malaysia Nature Society, Society for Engineering Geology and Rock Mechanics of Malaysia; Academy of Sciences Malaysia Disaster Risk Reduction Alliance Committee

International & National Reviewers: Geomorphology; International Journal of Geomatics, Natural Hazards and Risk; Engineering Geology, International Journal of Earth Science Informatics; Journal of Ecology and the Natural Environment; Arabian Journal of Geosciences, Sains Malaysiana; Malaysian Journal of Remote Sensing and GIS, Engineering Geology, International Journal of Disaster Risk Reduction.

Awards/Memberships: Top 11 Young World Geomorphologists, awarded by the International Association of Geomorphology in Cite des Science de la Villette, Paris, France, 2013; MERDEKA AWARD Grant International Attachment 2016; ASEAN 2017 Advanced Institute on Knowledge-based Actions for Disaster Risk Reduction by International Council for Science Regional Office for Asia Pacific, IRDR ICoE-Taipei; Integrated Research Disaster Risk (IRDR) Young Scientists Programme 2019 International Science Council (ISC), Global Young Academy (GYA), the voice of young scientists around the world @ www.globalyoungacademy.net