

Research Note

Advancing Subsurface Development for Sustainable Futures

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The workshop on Urban Geology of Kuala Lumpur was held on 23-24 January 2018 at The Everly Putrajaya, Malaysia. The event was jointly organised by the Department of Mineral and Geoscience Malaysia (JMG), British Geological Survey (BGS) and SEADPRI-UKM in collaboration with the Newton-Ungku Omar Fund (NUOF) Project Partners. Sixty participants from various local agencies came together to share knowledge and discuss current issues on subsurface geology for the future development of Kuala Lumpur. The attendees included those from JMG, Kuala Lumpur City Hall (DBKL), Universiti Kebangsaan Malaysia (UKM), University of Malaya (UM), Universiti Tenaga Nasional (UNITEN), University of Nottingham Malaysia, Public Works Department (JKR), PlanMalaysia and Selangor Housing and Real Property Board, among others. The workshop commenced with an opening session followed by a technical session and two training sessions where participants were able to gain in-depth knowledge on this subject.

The ultimate aim of this joint-workshop under the JMG-BGS Official Development Assistance (ODA) Project: Geoscience for Sustainable Futures is to construct the framework and lay the foundation for the Kuala Lumpur Urban Geology project. This workshop initiated the tentative project where they focus on sharing knowledge and good practices in relation to data acquisition, management and delivery, 3D modelling and geoscience communication. The workshop commenced with welcoming remarks delivered by YBhg. Dato' Shahar Effendi Abdullah Azizi, the Director General of JMG. The official opening was graced by YBhg. Datuk Ir. Dr. Haji Hamim bin Samuri, Deputy Minister at the Ministry of Natural Resources and Environment Malaysia (NRE). The BGS-ODA programme on Geoscience for Sustainable Futures: Resilience of Asian Cities supports the creation of an Asian urban hub of good practices and guidance, underpinned by a series of 'lighthouse' and 'follower' city studies to share and integrate learning where it supports four sustainable development goals, and covers three cities in Asia: Kuala Lumpur, Hanoi and Bangalore/Amaravati. Kuala Lumpur is selected as a 'lighthouse' city study as a "Platform for Subsurface Development" (Smith, 2018).

The KL Urban Geology project focuses on Kuala Lumpur as the pilot under the aegis of the City Hall of Kuala Lumpur (DBKL). DBKL being one of the main project partners is the key end-user of the project. Currently, there is a gap in communication and understanding between geoscientists and decision-makers (planners, engineers, policy-makers) regarding the subsurface. DBKL has several ongoing projects that will become the pillar of KL urbanization, focusing on economic growth, urban growth and urban transit in realising their vision to become a first class, equitable and sustainable city by 2020 (Mohd, 2018). However, the high demand for land use and urban activities to support the growing city's population continue to exert stress as space becomes more limited. The alpha world city could live up to its maximum potential only by delivering an integrated, multidisciplinary approach to the use of underground space to support the rate of urbanization we see today. To address the concerns of DBKL, especially in relation to the priority needs on the city's future development, the urban subsurface itself should be a central component of Kuala Lumpur's plans for a sustainable and resilient future city.

This pioneer project in Malaysia aims to highlight issues regarding the subsurface by exploring, promoting and improving the use of subsurface urban planning where ground risk could be minimized due to unforeseen ground conditions. The outcome would help to provide vital information for spatial planning policy while increasing the awareness of decision-makers regarding the subsurface environment. The mapping exercise conducted during the workshop was helpful to get the ball rolling. The main idea was to produce a mind map of linkages that represent responsibilities, collaborations and influence the potential partners have on one another, and to explore the interactions between pressures, stresses and opportunities that can be used to frame an integrated project in relation to the subsurface of Kuala Lumpur. Essentially, the idea of developing the subsurface in Kuala Lumpur could then be a priority for developers, given that proper and effective planning to build a sustainable city is done where both the surface and subsurface planning are harmoniously executed.

Overall, the participants were content with the outcomes of the workshop and have generated new collaborations beyond the project. Various subsurface-related challenges and opportunities were discussed in an open and integrated way during this workshop, which enabled the team to generate ideas for the project development while working towards the implementation of the city's vision for 2020. The event has instilled awareness and provided ample knowledge of the subsurface geology of Kuala Lumpur whilst promoting better communication between subsurface specialists and non-experts.

Reference

- Mohd, M.N., 2018. A Future Vision for Kuala Lumpur. Presentation Slides, Workshop on Urban Geology of Kuala Lumpur, 23 March 2018, The Everly Putrajaya, Malaysia.
- Smith, M., 2018. Geoscience for Sustainable Futures: Developing Resilience in Asian Cities. Presentation Slides, Workshop on Urban Geology of Kuala Lumpur, 23 March 2018, The Everly Putrajaya, Malaysia.