

TALK ON “INTEGRATED TWO-DIMENSIONAL DAM BREAK MODEL AND GEOSPATIAL-BASED APPROACH FOR PREPARING OF EMERGENCY ACTION PLAN (EAP)”

Organised by Water Resources Technical Division, IEM

BEM Approved CPD/PDP Hours: 2 Ref No.: IEM17/HQ/466/T

Date : 04th December 2017 (Monday)
Time : 5.30pm to 7.30pm (*Refreshments will be served*)
Venue : Auditorium Tan Sri Prof. Chin Fung Kee, 3rd Flr, Wisma IEM, Petaling Jaya
Speaker : Ir. Mazura Nor bt. Zulkifli

SYNOPSIS

The consequences resulting from dam failure usually lead to major damages, including loss of life and property destruction. To mitigate and manage the threats of dam break, it is essential to appreciate the characteristics of potential flood disaster in a realistic manner. In this study, an approach based on the integration of 2D hydrodynamic modelling and geospatial technologies is used to pre-plan the coordination of necessary actions by the dam owner and the responsible local, state, and/or federal officials to provide for timely notification, warning and evacuation in the event of an emergency. In addition, the preparation of EAP is to reduce the risk of loss of life and property damage, particularly in the downstream areas of a dam and the river basin, resulting from an emergency situation. This 2D flow simulation model with geospatial application is used to simulate flood hydrodynamic behaviour during the extended geometric information from a digital elevation model. Flow simulation of the dam break was performed and results were analysed using spatial analyst and mapped. Finally, a flood hazard map and flood evacuation map consisting of the inundation area, flood depth, flood flow velocity, flood crest arriving time and flood inundation duration were created in GIS environment. According to these maps, the potential failure of the dam would usually place a large number of people in danger. This study has shown that the application of GIS techniques in integrating with flow simulation modelling can significantly reduce the time and resources required to forecast potential dam break flood hazard. This can play a crucial role in improving both flood disaster management and land use planning downstream of dams.



BIODATA OF SPEAKER

Ir. Mazura Nor binti Zulkifli is the Head of Geospatial Engineering at Dr. Nik & Associates Sdn. Bhd. (DNASB). She currently is the Project Manager for the development of the National Geospatial Master Plan (2019 – 2028) – to develop national geospatial initiatives under the federal government’s National Geospatial agenda. She is also the Project Manager for Flood Mitigation Master Plan for Pahang River Basin.

Ir. Mazura Nor binti Zulkifli has over 20 years experience and specialized in river basin development. She began her career as a civil and hydraulic engineer in 1996 before becoming the Team Lead for geospatial engineering.

Ir. Mazura Nor binti Zulkifli holds a B. Eng. (Hons), Mara Institute of Technology (1996), Shah Alam, Malaysia and a M.Sc. in Hydraulic Engineering and River Basin Development, UNESCO-IHE, Institute of Water Education (2008), Delft, The Netherlands. She received Joint Japan/World Bank Graduate Scholarship for M.Sc. in Hydraulic Engineering and River Basin Development in 2006.

She is a Professional Engineer registered with the Board of Engineers, Malaysia (BEM) and a Corporate Member of the Institution of Engineers Malaysia. She was also Chairperson for Local Agenda (LA21) Committee (2009 – 2011), an adjunct lecturer and external examiner for Hydraulic Engineering at University Technology Petronas (2010 – 2014).

Ir. Dr. Wong Wai Sam

Chairman

Water Resources Technical Division, IEM

ANNOUNCEMENT TO NOTE

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Registration Fee:
RM50.00
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