

The Institution of Engineers, Malaysia

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Talk on "National Flood Forecasting and Warning System – A Challenge and Way Forward

Organised by Water Resources Technical Division, IEM BEM Approved CPD/PDP Hours: 2 Ref No : IEMHQ/677/T

Date : 25th November 2019 (Monday)

- Time : 5:30 pm 7:30 pm (*Refreshments will be served in 2nd Flr at 5.00pm*)
- Venue : Auditorium Tan Sri Prof. Chin Fung Kee, 3rd Floor, Wisma IEM, PJ
- Speaker : Ir. Sazali Osman

SYNOPSIS -

Flood forecasting is one of the most important non-structural flood mitigation measures. In the rapid urbanization area, this is even more important as flood mitigation engineering could not be built as quickly as the urbanization does. On December 2014, east coast of Malaysia was hit by an extreme flood in decades occurred in our country. The rainfall return period was more than 100 Annual Recurrence Interval (ARI), which causes massive flood due to widespread rainfall in the catchment area. The flood flow has exceeded the carrying capacity of the river and on certain locations, the flood depth was recorded as high as 12 meter from the ground level.

Back to catastrophic flood occurred in 1971, the government has embarked to setup a Permanent Flood Commission Committee to look into long term solution to mitigate flood. One of the committee functions was to establish a rainfall and water level station which is able to measure and deliver the data as soon as possible for the use to obtain flood forecast at flooded area. The flood forecasting model was introduced as a function to forecast river water level at a particular location. The forecast lead time totally depend on the time lag of surface runoff from the upstream at higher level flowing to inundation area at a lower level and finally dissipate to the sea. With the advance of latest technologies on rainfall forecast and higher accuracies of surface topographic data, the flood forecasting model have a made significant evolution by using more sophisticated and user oriented model to achieved better and accurate flood forecast output. This talk will present the concepts, capability and challenges towards the development of National Flood Forecasting and Warning System (NaFFWS).

<u>Speaker's Biodata</u> - Ir. Sazali is a Senior Principal Assistant Director in the National Flood Forecasting and Warning Centre, Department of Irrigation and Drainage Malaysia. He obtained his BSc. (Hons) Civil Engineering in August 2000 and MSc. Civil Engineering in April 2012 (Specialisation in Hydrology) from University Sains Malaysia. He is a subject matter expert in flood forecasting and warning with more than 19 years' experience in operational flood forecasting, hydrological data collection and analysis, and applied hydrology for design.

He began his career in DID from August 2000 and currently Head of the Planning and Development Unit. The main role of the unit is implementing National Flood Forecasting and Warning Programme (PRAB). Ir. Sazali has vast experience in operating flood forecasting modelling during various large flood events, for example, 2004 flood in Kelantan, 2006/2007 flood in Johor, 2007 flood in Kuala Lumpur, 2013 flood in Kuantan & Kemaman and the recent flood in 2014 occurred in east coast of Peninsular Malaysia.

Ir. Sazali also have strong knowledge on the fundamental hydrology and involved directly on the development of DID Hydrological Procedure (HP27); Design Flood Estimation methods using Clark Unit Hydrograph. To date, he has published thirteen journal papers particularly on unit hydrograph methods, flood frequency analysis and flood forecasting for Malaysia environment. Ir. Sazali also acted as Malaysia focal point for WMO/Typhoon Committee Working Group for Hydrology which is currently lead few projects related to the hydrology and water resources.

Dato' Ir. Mohd Azmi Chairman Water Resources Technical Division, IEM

ANNOUNCEMENT TO NOTE FEES

Members

Administrative Fee :

<u>Online</u>	RM15
<u>Walk In</u>	RM20

Non-Members

Registration Fee: RM50 Administrative Fee: RM20

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