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APPLICATIONS OF RIVER WATER QUALITY MODELING IN MALAYSIA

(Organised by the Water Resources Technical Division, IEM)

BEM Approved
CPD Hours: 2
IEM12/HQ/ 122 /T

Date : **22 May 2012 (Tuesday)**
Time : **5.30 pm (Refreshment would be served at 5.00 pm)**
Venue: **Tan Sri Chin Fung Kee Auditorium, Wisma IEM, Petaling Jaya**
Speakers : **Ir. Assoc. Prof. Dr Zaki Zainudin**

SYNOPSIS

During the mid 1990s, water quality modeling was still a relatively new concept in Malaysia, with little application in river basin management. Mohamed (2000) conducted the first comprehensive modeling study in the Sg. Selangor river basin using QUAL2E. The scope of the study primarily addressed the suitability of the inbuilt reaeration coefficients and its applicability under tropical conditions. A boom in water quality modeling applications became more apparent in the early twenty-first century, when the two main government agencies involved in river basin management, the Department of Environment (DOE) and the Department of Irrigation and Drainage (DID) started adopting river models more intensively in their respective river basin management programs, including the *Program Pencegahan Pencemaran dan Peningkatan Kualiti Air Sungai* (DOE) and the Integrated River Basin Management (IRBM) program (DID). One of the earliest river rehabilitation study conducted by DOE was for the Tebrau and Segget river basins in Johor. Various modeling scenarios were simulated to achieve a Class III denotation of the National Water Quality Standards (NWQS) using the QUAL2E model. Subsequent studies followed for other basins throughout the country namely the Sg. Langat, Sg. Linggi, Sg. Sepetang, Sg. Rajang, Sg. Merbok and Sg. Kuantan basins where models such as QUAL2E, QUAL2K or WASP were utilized assist the development of proposed mitigation measures. Besides river rehabilitation programs, water quality models have also been used in Environmental Impact Assessment (EIA) studies related to the development of specific industries. Current regulatory effluent control measures are concentration based and do not prescribe volumetric discharge limits, hence also not explicitly addressing the Total Maximum Daily Load (TMDL). EIA studies are alternate venues where TMDL can be enforced under the designated approval conditions. Water quality modeling in Malaysia has clearly gained wide acceptance throughout the years and looks to flourish further as a critical management tool in river basin management.

BIODATA OF SPEAKER

Ir. Assoc. Prof. Dr. Zaki Zainudin is attached to the Department of Biotechnology Engineering, Faculty of Engineering, International Islamic University Malaysia (IIUM). He is a Professional Engineer with the Board of Engineers Malaysia (BEM) and Chartered Environmentalist (CEnv) with the Society for the Environment (SocEnv, UK). Ir. Zaki is a renowned environmental specialist in the area of water quality assessment and modelling, having led and played key roles in over seventy (70) environmental projects, including monitoring exercises, Environmental Impact Assessments (EIAs) and special standalone environmental studies nationwide; for both private and government sectors. He is often a source of reference for various organizations on surface water quality management; such as being an expert panellist for the Department of Environment Malaysia (DOE, EIA, Water and Marine units) and is advisor to many prominent environmental firms. He has conducted various workshops and talks on water quality and modelling at both local and international venues. Ir. Zaki is also on the management committee of the International Water Association (IWA), Watershed and River Basin Management (W&RBM) Specialist Group. The above is a glimpse of his credentials. His CV and activities can be viewed at: <http://www.zakizainudin.blogspot.com>.

Ir. Zainal Abidin Othman

Chairman,
Water Resources Technical Division, IEM

Announcement to note:

1. Talk is **STRICTLY** for IEM members only (walk in)
2. Limited seats available on a "first come first served" basis.
3. No telephone and/or fax reservation will be entertained.
4. Latecomers will not be allowed entrance, if the lecture hall is full.
5. Please bring along this flyer and membership card for confirmation of attendance (CPD purpose).

For IEM members, membership cards MUST be presented for identification purpose. Members who fail to show their membership card will be charged a fee of RM20.00.

FUNDS FOR IEM NEW BUILDING

Kindly be informed that IEM will be charging participants RM10.00 administrative fee to evening talks organized by IEM. The fee would be used for overhead costs, building maintenance expenses as well as to support the purchase of the new building.

Students are however exempted. Your understanding is greatly appreciated.

CPD HOURS CONFIRMATION

Name of Member: M'ship No:
Signature: Date :