



# UTM

UNIVERSITI TEKNOLOGI MALAYSIA

Faculty of Engineering

## ECO-HYDROLOGY RESEARCH GROUP (ERG)

In a catchment, land use changes and climate change may modify the hydrological regime especially in terms of flood potential, diminishing dry season flow, water quality degradation and accelerated erosion and sedimentation. In urban and residential areas, flood and water pollution are the major issues that warrant sustainable solution. Managing Point Source (PS) & non-point source (NPS) pollution is equally important in protecting river quality. Along this line, the group has carried out various research related to flood modeling, extreme rainfall analyses, quantification of pollutant loading, pollutant transport mechanism in urban and plantation catchments as well as incorporating latest computer and programming tools to solve various eco-hydrological problems. Our group deals with both Eco-hydraulic and Eco-hydrological problems where we consist of expertise in the field of hydrology, hydraulic, climatology and environment.



### NICHE AREA: RESOURCE SUSTAINABILITY

#### Sustainable Practices

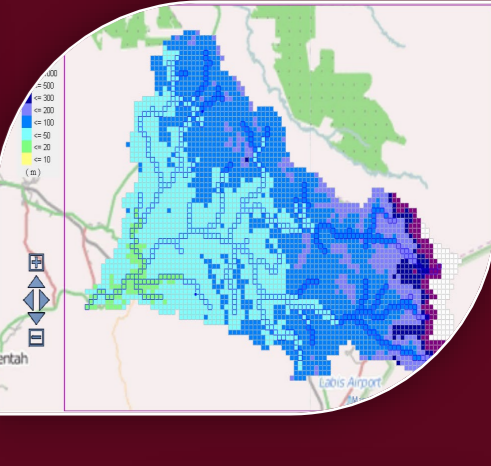
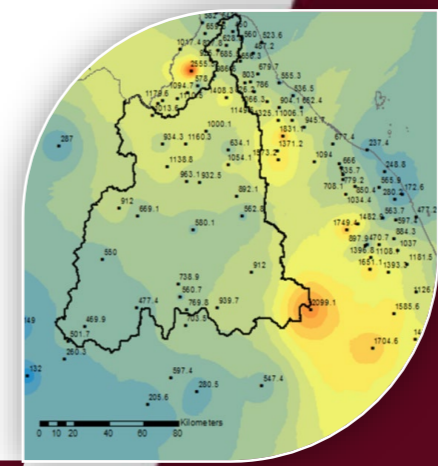
- Integrated river basin management & modeling

#### Ecosystem Services

- Climate change impact

#### Water and Wastewater

- Ecosystem conservation
- Environmental Flow
- Water demand management
- Water related disaster



### RG MEMBERS



**Prof. Dr. Zulkifli Yusop**  
Integrated River-basin Management, Eco-hydrology



**Mr. Kamarul Azlan M Nasir**  
Urban Stormwater Management, Hydrological and Hydraulic Modeling



**Dr. Noraliani Alias**  
Urban Water Quality & Flood Modelling



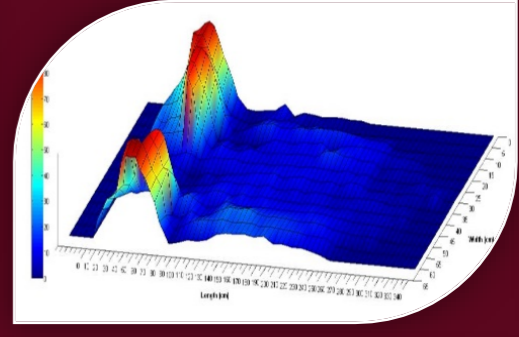
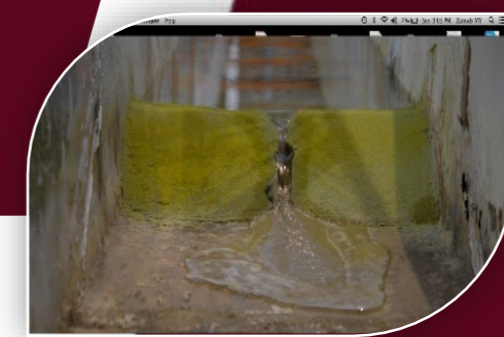
**Mdm. Zainab M Yusof**  
Hydraulic Structures & Flood Modelling



**Dr. Kogila Vani Annammala**  
Environmental Forensic (Tracer & Radionuclide Fallout), Erosion & sediment



**Dr. Erwan Hafizi Kasiman**  
Computational Fluid Dynamics (CFD), Wave Mechanics & Programming



### COLLABORATORS



### FLAGSHIP RESEARCH

**Total Maximum Daily Load for Skudai River Basin**

**Impact of Climate Change to Regional Extreme Rainfall Analysis Considering Homogeneous Regions**

**Cost Benefit and Reliability Analysis of Large-Scale Rainwater Harvesting**

**Transference from Crime Scene to Forensic Evidence: Linking Land-use, Erosion, Sediment and Quantitative Evaluation of Erosion in Kelantan River Basin, Malaysia.**

**Influence of Catchment Morphometric on Flood Characteristics for Kelantan River Basin**

**Identifying Influence of Rainfall Characteristics on First Flush Behavior in Tropical Area**

**Developing An Integrated Disaster Risk Index Considering Climate Change – A Pilot Project For Malaysian River Basin**

**Hydrological Environmental Flow to Support Integrated River Basin Management of Sg Johor  
Finite Element Modeling for Pollutant Transport Problem**

**For further details, please contact:**

**Head of Research Group**



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Climate change impact, Statistical Hydrology, Flood Management

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