Objectives

Solutions to River Engineering Problems and Case-studies:

1. Kota Tinggi Flood;
2. Sediment Impact;
3. Flood Control;
4. River Engineering and Design;
5. River Engineering near Estuaries.

1. Case Study – Kota Tinggi Flood
2. Case Study – Sediment Impact in Venezuela
3. Case Study – The Muda River Flood

BANJIR DAERAH BALING OKTOBER 2003

FLOODED SITE PENGARUH BANJIR - 1-10 OKTOBER 2003
2003 Hydrograph @ Ldy Victoria

Q = 1340 m³/s

50 yr (Qmax=1768 cumec)-Hec-Hms
100 yr (Qmax=2001 cumec)-Hec-Hms
50 yr (Qmax=1815 cumec)-JPZ
100 yr (Qmax=2130 cumec)-JPZ
Flood 2003 (Qmax =1340 cumec)
Channel realignment

Sand and Gravel Mining

River Sand Mining
Longitudinal Flood Profile for Sg Muda (Q=1340m³/s)

Off-stream Sand and Gravel Mining
4. Case Study – Retrofit of the Gupo Bridge Piers

Rainfall distribution of Typhoon Maemi in Korea
Case-Study: Gupo Bridge during Typhoon Maemi in 2003
5. River Engineering near Estuaries
Quasi-steady state model

Water stage and discharge graph at Gupo bridge
Example 3-D Model Mississippi

Example of Estuarine flow dynamics using SUNTANS

Salinity field (blue is fresh and red is salty) at the mouth of the Snohomish River, showing the oscillation of the salt wedge and wetting and drying of the intertidal regions.

Erosion and River Mechanics Textbooks
Thank You!

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