การฝึกอบรมเชิงปฏิบัติการ

เรื่อง

การประยุกต์ใช้ชุดแบบจำลอง

Decision Support Framework (DSF)

โดย

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วิศวกรชำนาญการพิเศษ

16-18 สิงหาคม 2560

IQQM Calibration Technique

Purpose of calibration

To ensure water balance components are the correct magnitude, to give confidence in estimates of

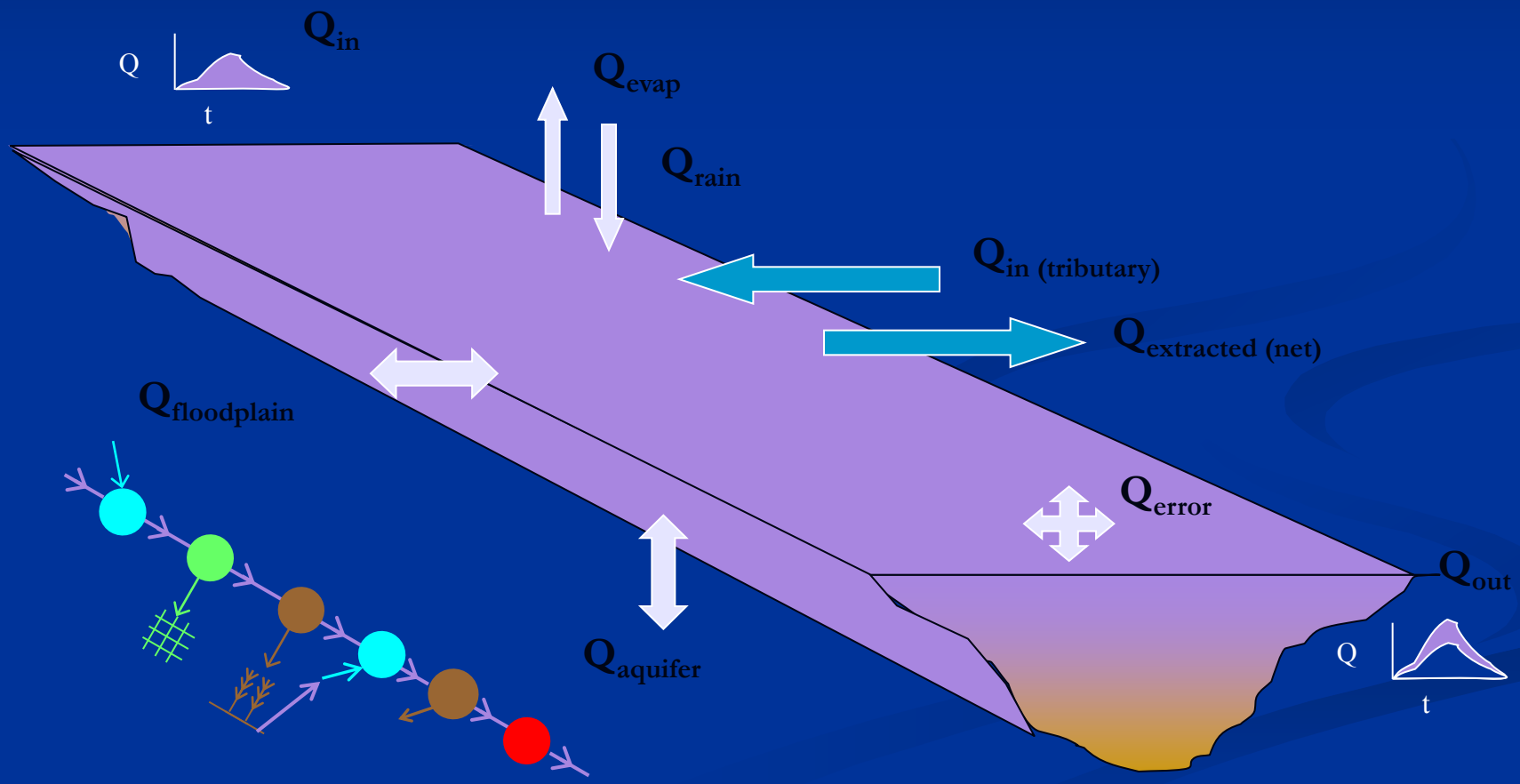
- water availability (runoff)
- water demands
- impacts of interventions
- surplus water

Calibration and data

- Calibration can only take place against available data.

- Errors in one component of water balance will be masked by errors in other components.

Water balance components in flow calibration



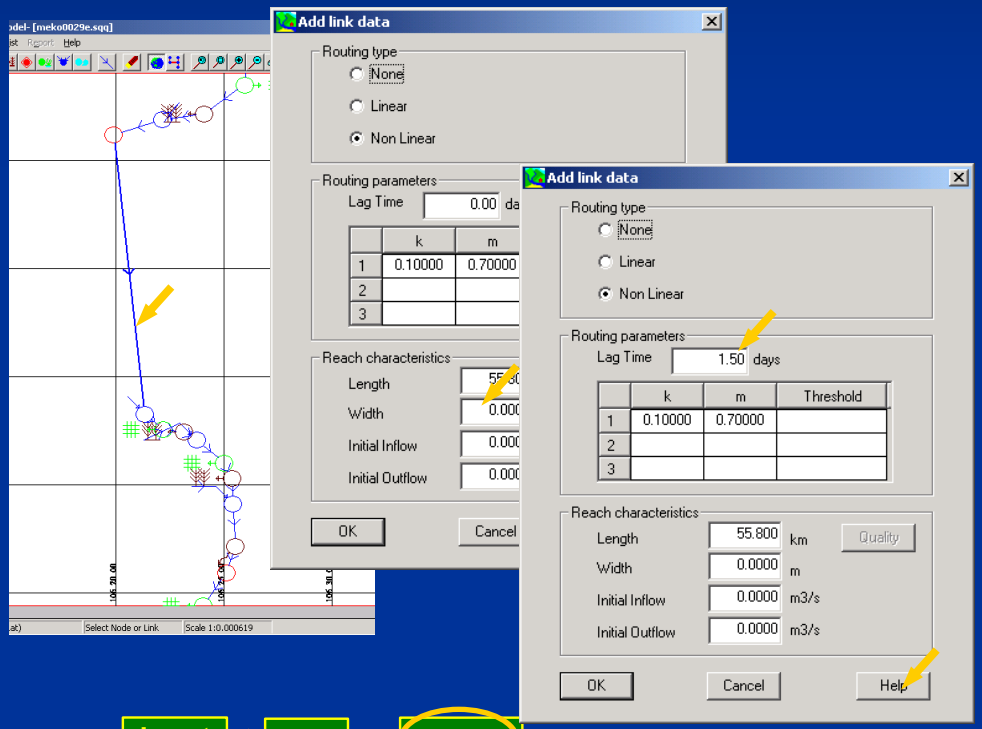
Flow calibration method

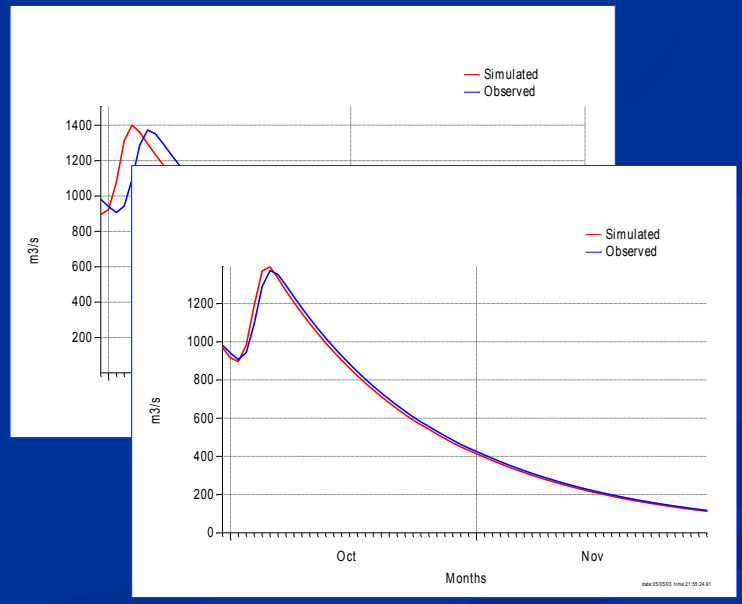
1. Calibration of timing of hydrograph peaks
   by lag time.

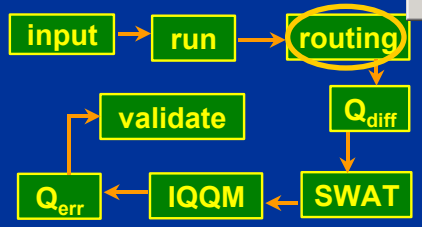
2. Calibrate shape of hydrograph
   by non-linear routing parameters ($S=\mathbf{k}Q^{m}$).

3. Calibrate mass balance for flow distribution using
   effluent node.

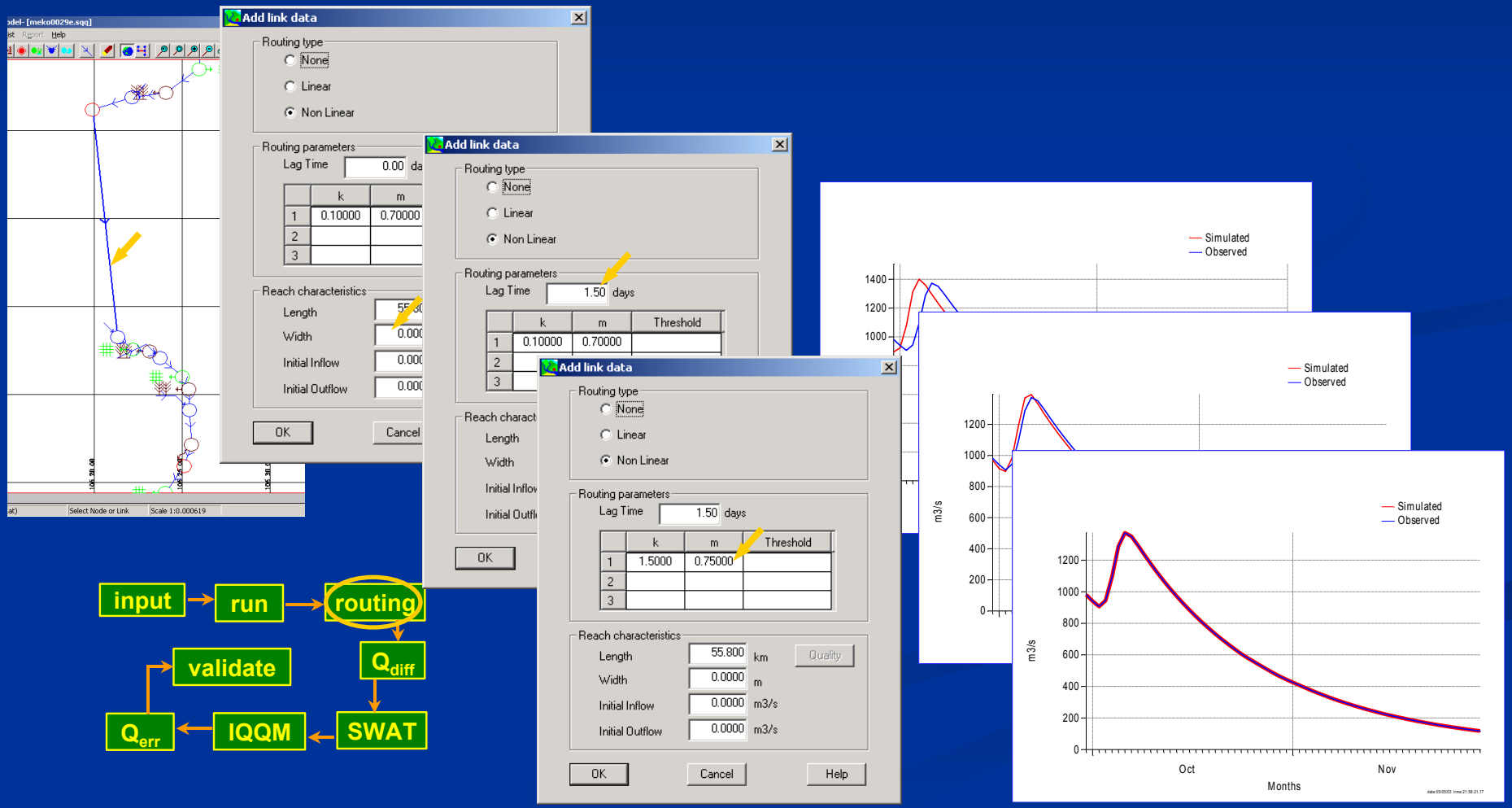
1. Calibration of timing of hydrograph peaks by lag time







2. Calibrate shape of hydrograph by non-linear routing parameters ($S=kQ^m$).

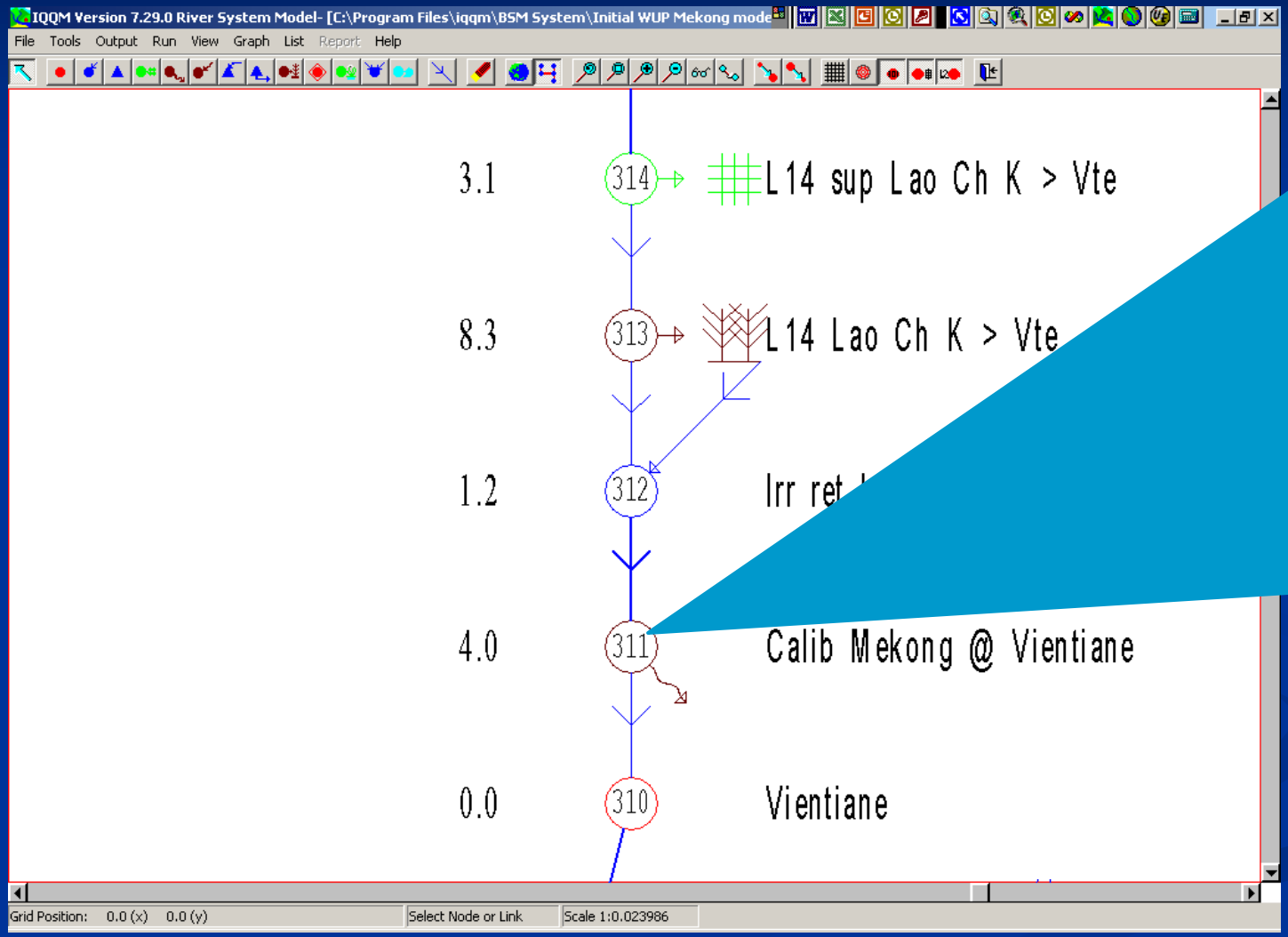


3. Calibrate mass balance for flow distribution

- Observed Flow > Simulation Flow
  → Use Potential Demand

- Simulation Flow > Observed Flow
  → Use Loss Node

IQQM Calibration by losses node



River flow (m^3/s)	Loss (m^3/s)
0	0
900	0
1320	130
1515	130
2620	220
8000	250
10500	350
16150	550
19000	1400
1.16E+35	8.56E+33

Method to calibrate mass balance for flow distribution using effluent node.

1. Plot graph between obs. and sim. Flow in Ranked
2. Add node 4.0 (Effluent Node) before simulated Node (0.0)
3. Add data in Specific data in general tab (River flow)
4. Input in River flow VS effluent flow

Demonstrations