

# Promotion of Dissemination of Hydraulic / Hydrologic Analysis Software Platform

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## 1. Introduction

Since April 2007, the River Department has been developing a platform (CommonMP: Common Modeling Platform for water-material circulation analysis) for analysis model that simulates complicated hydraulic / hydrologic phenomena in river basins on the PC by connecting multiple hydraulic / hydrologic analysis models (river channel model, outflow model, etc., collectively "element models"). After releasing this platform on the website <sup>1)</sup> in March 2010, we upgraded its version every year for consistent improvement seeking better convenience and operability, while promoting the disclosure, etc. of its element model to the public.

The River Department, in collaboration with the main office of the Ministry of Land, Infrastructure and Transport (MLIT), has been actively holding open seminars, training seminars, etc. in order to promote full-scale introduction of CommonMP it developed into river management practice.

## 2. Seminars in Regional Development Bureaus

We have been holding seminars in Regional Development Bureaus to provide an opportunity to learn skills for CommonMP. In fiscal 2014, we held CommonMP seminars in 8 Regional Development Bureaus, targeting not only the personnel of the Bureaus but personnel, students, etc. of universities and technical colleges.

Considering such seminar as an opportunity to learn the basics of CommonMP, such as installation of element model, project implementation, and delivery of project, we provided introductory lectures and operational practice, such as outline and basic operation of CommonMP, reproduction of flood, and calculation of

flood control effect in dams.

## 3. Training in the College of Land, Infrastructure, Transport and Tourism

CommonMP practice time is included in "Channel planning and environmental training" (from fiscal 2012) and "Social capital GIS [River] training" (from fiscal 2010), both held by the College of Land, Infrastructure, Transport and Tourism. Particularly, in "Social capital GIS [River] training," 4 days out of the total period of 5 days were allocated to practice for CommonMP in a concentrated manner.

Considering such training as an opportunity to learn applied operation of CommonMP, such as establishment and alteration of project and parameter sensitivity analysis, we mainly allocate the time to practice assuming the use of CommonMP in practical operation. In fiscal 2014, we examined river planning by calculating flood runoff using the storage function method and channel tree management by calculating quasi-two-dimensional non-uniform flow, using CommonMP.

## 4. Future activities

In reference to the opinions, etc. of attendees to training and seminars, we will discuss how to improve the contents, such as provision of training courses according to proficiency, introduction of means to check proficiency, such as practice problems or issue presentation, and improvement of teaching material, and reflect results in activities of next and subsequent fiscal years.

[Reference] 1) CommonMP Website:  
<http://framework.nilim.go.jp>

Table. Curriculum in Regional Development Bureau

Seminar 1	Outline of CommonMP	Purpose and objective of CommonMP and points of attention in use.
Operation practice 1	Basic matters and basic operation practice	Explanation of terms and management of element models, simulation project, etc.
Seminar 2	Utilization in river operation	Merits of use for river management operation Calculation of flood effects for dams
Operation practice 2	Practice for data acquisition tools and runoff calculation	Data acquisition by hydraulic / hydrologic data acquisition tool Reproduction of recent floods and sensitivity analysis using the multithread function
Operation practice 3	Editing of channel cross section using CommonMP-GIS	Calculating of quasi-two-dimensional non-uniform flow Calculation of water level reduction effect by cutting trees and excavation in river channel.